



Published on the 1st of each Month by

THE INDIA RUBBER PUBLISHING CO.
No. 150 NASSAU ST., NEW YORK.

HENRY C. PEARSON,
EDITOR.

HAWTHORNE HILL,
ASSOCIATE.

Vol. 31.

MARCH 1, 1905.

No. 6.

SUBSCRIPTIONS: \$3.00 per year, \$1.75 for six months, postpaid, for the United States and Canada. Foreign countries, same price. Special Rates for Clubs of five, ten or more subscribers.

ADVERTISING: Rates will be made known on application.

REMITTANCES: Should always be made by bank draft, Post Office Order, or Express Money orders on New York, payable to THE INDIA RUBBER PUBLISHING COMPANY. Remittances for foreign subscriptions should be sent by International Post order, payable as above.

DISCONTINUANCES: Yearly orders for subscriptions and advertising are regarded as permanent, and after the first twelve months they will be discontinued only at the request of the subscriber or advertiser. Bills are rendered promptly at the beginning of each period, and thereby our patrons have due notice of continuance.

COPYRIGHT, 1905, BY
THE INDIA RUBBER PUBLISHING CO.

Entered at New York Post Office as mail matter of the second-class.

TABLE OF CONTENTS.

	PAGE.
Editorial:	
The Value of The Jobber.....	181
Common Sense Specifications.....	181
Rubber Goods in the Tropics.....	182
Minor Mention.....	182
Literature of India-Rubber:	
"Poselins" and "Seringuina".....	182
Recent Reports Regarding the "Guayule" Plant.....	183
The Colorado Rubber Record.....	183
A Glimpse of Japan and its Rubber Industry.....	184
[With 11 Illustrations of Scenery, Rubber Machinery, and Japanese Rubber Footwear.]	185
Rubber Planting and Exploitation:	
[Rubber Planting Interest in Ceylon. Reported Rubber Planting in Colombia. View of Cultivated Rubber in Mexico. To Plant Rubber in Hawaii. Notes from Mexico, South America, Africa, and the Far East.]	188
[With 1 Illustration.]	
The India-Rubber Trade in Great Britain. Our Regular Correspondent [The Motor Tire Trade. Electrical Notes. Plantation Rubber. Dr. C. O. Weber. Sulphur Production in America. Disturbances in Russia. Dermatine.].....	191
Some Wants of the Rubber Trade.....	192
The Trouble With African Rubbers.....	193
Carbon Tetrachloride as a Solvent.....	194
Electrical Exhibition at Berlin.....	195
The Late Dr. C. O. Weber.....	196
New Goods and Specialties in Rubber.....	197
[The "Century" Adjustable Atomizer No. 10. The "Hygeia" Nurser. Rojo's Aseptic Rubber Dam Holder. No. 126 Barclay Atomizer. The "Canton" Rubber Soap Tray. Counterfeit Cigars. Bathing Caps for Dolls. "Benton" Pneumatic Gun Recoil Pad.]	
[With 9 Illustrations.]	
New Trade Publications.....	198
Recent Rubber Patents.....	199
[American. British. German. French.]	
[With 8 Illustrations.]	
New England Rubber Club Midwinter Dinner.....	201
[With Portraits of L. D. Apsley, John D. Long, and Samuel P. Colt.]	
Obituary:	
Almeron H. Yeomans (With Portrait).....	206
Pitt Barrows.....	208
Miscellaneous:	
A Language Study on Rubber.....	195
British Enterprise in Brazil.....	196
News of the American Rubber Trade.....	207
[With Portrait of A. M. Stickney.]	
Review of the Crude Rubber Market.....	213

THE VALUE OF THE JOBBER.

THE jobber in almost any line at the present time is apt to have his moments of doubt as to whether, coming as he does between the manufacturer and the retailer, he is an absolute necessity. The fact that certain makers of goods deal direct with the retailer, and many times with the individual purchaser, leads him to wonder if his position is secure and permanent. This thought has come to the front in a very marked degree in the grocery line, the jobbers of which bemoan the disposition of the manufacturer to ignore them in the distribution of his products. This does not necessarily mean the elimination of the jobber, but it does urge him to new methods of distribution and a closer touch with the retailer. Above all, it means that there should be no antagonism or any fighting with the maker of the goods.

The sagacious jobber is the one who, to begin with, gets closer to the manufacturer, proves that he has an organization better adapted for the distribution of goods than the manufacturer can hope to obtain without much costly effort, and that he markets goods at a profit that does not invite the latter's competition. There is no doubt, in the rubber trade, at least, that the jobber is still a necessity and is the most natural and effective medium between the manufactured products and cash returns.

To-day, with crude materials so abnormally high, and where such an amount of capital is required to run even a small business, this point is one that should have great weight. Further than this, the credit system in a well equipped jobbing house is an evolution of much thought and experience, and is a sort of insurance for which the manufacturer pays a very small premium.

COMMON SENSE SPECIFICATIONS.

THE simplest form of selling rubber goods is, of course, by sample, a manner that endured for a long time in the early days of trade. With the increase in the volume of business and with, supposedly, a greater knowledge of India-rubber on the part of the purchaser, specifications came into vogue. Indeed, it was necessary. Great corporations and governments buying large quantities of certain types of rubber goods found it best to institute certain tests, which should signify, in a measure at least, the quality in such goods. Many of the simpler tests were most excellent; many others imposed a hardship upon the manufacturer and were absolutely useless either to buyer or seller.

Specifications that have been made up by a purchaser only partly familiar with the manufacture of rubber goods are bound to be full of inaccuracies. Nor is it always the makers' fault. The only actual test is service, and even that under varying conditions will give widely varying results. What then can be expected where artificial tests are supposed to define the actual status of the goods under consideration? Friction which strips so many parts of an inch under pull of a 25 pounds weight may be passed as above grade, and yet three months later be absolutely

worthless. The purchaser who insists that 40 per cent. of Pará rubber be the basis of his compound may be grossly handicapping the manufacturer who would get infinitely better results by the mixture of two or three different kinds of rubbers, and so on.

It is to be noted in this connection, however, that there is a marked tendency on the part of those who make specifications to simplify them as much as possible, to cut out the freak clauses, that give some one manufacturer an unfair advantage over the others, and to allow only responsible firms a chance to bid for their business. This is just as it should be, and marks a long step in advance over the old time method of procedure.

RUBBER GOODS IN THE TROPICS.

PEOPLE who send goods made of India-rubber to the tropics—that is, manufacturers—are apt to labor under the impression that the better the quality, the longer the article lasts. This is the truth only to a degree. In the line of mechanical rubber goods, the better grades outlast the inferior, but when it comes down to wearing apparel, such as mackintoshes, the reverse is the rule.

On one occasion, before taking a long tropical trip, the writer provided himself with the very best grade of light tan-colored pure gum coat that he could obtain. This was of American make. He also purchased a light weight double texture mackintosh made by an English house renowned for the quality of its goods and advertised as particularly adapted for use in the tropics. Both of these garments softened and became very sticky under the intense, moist heat near the equator. In the double textured article, wherever cement had been used, it worked through the cloth and the pockets stuck together so tightly that they were useless.

In talking with those who handle rubber goods in the tropics, the experiences cited are said to be every day occurrences. The rule seems to be that the heavily compounded goods stand the climate best. A high grade of fine, white sheeting turned very yellow, but was otherwise unaffected. Druggists' sundries in white rubber stood just as well as they did in the temperate zone, but the pure gum goods were very apt to soften and deteriorate.

JUST ABOUT THIS TIME OF YEAR, that is, the beginning of the dry season in the tropics, there is a general hegira of presidents, vice presidents, treasurers, and inspectors of rubber plantations toward the southland. If a census of foreigners were taken to-day in Mexico, the *tierra caliente* would be shown to contain many hundreds of Americans, all interested in rubber. By April, at the latest, the most of them will be back with many photographs, much personal experience, hundreds of insect bites, and, let us hope, with the report that many companies are beginning to market cultivated rubber.

THE ALLEGED PROPHECY MADE BY ANDREW CARNEGIE, that the coming men of power would be rubber millionaires, is already being fulfilled—says the Boston *Record*. That excellent and usually accurate paper goes on to remark that the late Sir Henry M. Stanley left a fortune, consisting largely of rubber plantations in Central Africa. Both of the above statements would be much more interesting and valuable were they true. THE INDIA RUBBER WORLD long ago inquired of Andrew Carnegie if he ever made such a statement, and he said

he never did. Further than this, up to the present time, the rubber planting that has been done in Africa appears of very doubtful value, and if Stanley's possessions consisted only of the aforesaid rubber plantations, the money that he left would fall very short of even one million.

THERE MUST BE SOMETHING IN RUBBER PLANTING after all, because many rubber manufacturers, for a long time skeptical, are beginning to ask questions about the progress of plantations in the Far East and in the countries to the south of us; but an indication more sure than that is that during the last three months not a few brokers and importers have been seeking lists of rubber plantations. Not quite convinced, perhaps, but sitting up and taking notice.

LITERATURE OF INDIA-RUBBER.

DER PYROGENE ZERFALL DES KAUTSCHUKS. AELTERE UND neuere Studien über die Produkte der trockenen Destillation des Kautschuk von Dr. Rudolf Ditmar, Graz. Dresden: Steinkopff & Springer. 1904. [Paper. 8vo. Pp. 41. Price, 1 mark.]

IN this brochure the author gives a compilation of all the known facts regarding the destructive distillation of Caoutchouc and the substances produced therefrom. The introduction enumerates the principal works in print containing references to the subject. Detailed literary references on the pyrogenous dissolution conclude the brochure. In the compilation of the researches on the products of distillation of Caoutchouc Dr. Ditmar has undertaken a very laborious work, well worthy of consideration; he has studied the various fragmentary articles, appearing from time to time in the publications of the branch, thoroughly, and excerpted them in detail. Not alone the rubber chemist, but organic chemists in general will welcome this little work, which forms a contribution of distinct value to the literature of the chemistry of rubber. The whole forms a reprint of papers first published in the *Gummi-Zeitung*.

KAUTSCHÜKGEWINNUNG UND KAUTSCHUKHANDEL AM AMAZONENSTROM. Von E. Ule. [Supplement to *Der Tropenblätter*, Berlin, January, 1905.] [Pp. 11-71; map.]

THE EXPEDITION OF ERNST ULE TO THE RUBBER DISTRICTS OF THE AMAZON, THE RESULTS OF WHICH WERE FIRST CONTRIBUTED THROUGH THE *Natzzblatt* OF THE ROYAL BOTANICAL GARDENS AND MUSEUM AT BERLIN, HAS BEEN NOTICED ALREADY IN THESE PAGES. IT WAS DOUBTLESS THE MOST THOROUGH EXPLORATION OF THE FIELD YET MADE BY A COMPETENT OBSERVER, AND ITS RESULTS CANNOT FAIL TO PROVE OF MUCH ULTIMATE BENEFIT. THE FORMER REPORTS WERE CONTRIBUTIONS TO BOTANICAL KNOWLEDGE, WHEREAS THE PRESENT WORK, WHILE ENUMERATING THE RUBBER PRODUCING SPECIES OF THE AMAZON, IS DEVOTED LARGELY TO THE COMMERCIAL ASPECTS OF RUBBER GATHERING AND THE EXPORT OF RUBBER. THE SOURCE OF THE AMAZON RUBBER COMMERCIALLY KNOWN AS "CAUCHO" IS TREATED IN A MORE SATISFACTORY MANNER THAN BY ANY PREVIOUS WRITER, THE TREE HAVING BEEN RECOGNIZED AS A DISTINCT SPECIES OF *Castilloa*, WHICH IS DESIGNATED BY DR. OTTO WARBURG, IN HONOR OF THE EXPLORER, AS *Castilloa Ulei*.

IN CURRENT PERIODICALS.

LES PLANTES à CAOUTCHOUC DU SUD-ANAM. BY MONSIEUR VERNET, CHEMIST TO THE PASTEUR INSTITUTE IN NHA-TRANG. [Report on four rubber yielding lianes (climbers), recently discovered in French Indo-China, and considered valuable and susceptible of cultivation: *Ecdysanthera Langbiani*, *Ecdysanthera Annamensis*, *Pensicarpus montana*, and *Chone morpha Yersini*. Illustrated.] = *Bulletin Économique*, Hanoi. VII-35 (November, 1904.) Pp. 1179-1206.

SUR LES CASTILLOA DU COSTA-RICA. BY H. PITTIER DE FABREGA. [Discussion of the question of species.] = *Journal d'Agriculture Tropicale*, Paris. V-43 (January 31, 1905.) Pp. 14-17.

MORE ABOUT "POZELINA."

THERE appeared in the January 1 issue of this Journal (page 116) an article headed "The Merits of Pozelina," the purpose of which material, in connection with the coagulation of rubber, is further indicated in the following letter since received from the proprietor, in Pará:

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am in receipt of your favor of December 8 last, to which I beg to reply. I note the interest you have taken in learning something further about "Pozelina" than the information contained in our advertisements in the *Folha del Norte*, and for the purpose of complying with your wish, I beg to state that Pozelina is the invention of Mr. Thomas Cantuaria, an old rubber tree explorer, who discovered it after long continued and careful experiments. Its principal property is the preservation of the rubber milk in a perfectly fluid state during the time required for its transportation to the factory where it can be conveniently fumigated. An experience of more than 20 years has shown that crude rubber prepared with the aid of Pozelina possesses greater elasticity and is more homogenous, and for these reasons it is always quoted higher in the market. Pozelina is now in general use, its cost being 4000 reis per can of 500 grams. The contents of a can are sufficient for the preparation of 50 kilos of crude rubber.

[NOTE—With exchange at 12 pence per milreis, these figures afford the following equivalents: Cost of Pozelina, 88.3 cents or 3s. 7½d. per pound in weight, this quantity being sufficient for 100 times the weight in dry rubber.—THE EDITOR.]

Besides this preparation Mr. Thomas Cantuaria is likewise the inventor of an apparatus for the preparation of crude rubber, by which fumigation becomes unnecessary. This apparatus has been in use for more than 20 years, and produces excellent results.

As Mr. Thomas Cantuaria's preparations are in general demand, a number of more or less clumsy imitations are being offered under different names and with an extraordinary amount of advertising, to which I call your attention because you advocate the interests of the rubber trade.

Hoping to have satisfied your wish, and assuring you that I shall always be at your service, I remain yours very truly,

A. J. A. DE MAGELHAES,

Pará, Brazil, February 1, 1905.

AND NOW COMES "SERINGUINA."

ANOTHER correspondent at Pará sends to THE INDIA RUBBER WORLD a copy of a printed circular relating to another material offered for assisting rubber workers in the process of coagulation, called "Seringuina" by its inventor, Dr. Cerqueira Pinto, of Pará. The statements of the circular, translated from the Portuguese, and condensed somewhat, are as follows:

Seringuina is a chemical product used for retarding, for any desired time, the coagulation of the *latex* of rubber and related trees, and producing, after the smoking process, a fine and pure rubber. Seringuina contains no potash or corrosive substances. In the fumigating process to which the rubber milk is subjected, the Seringuina, when exposed to the heat of the smoke, evaporates entirely.

The rubber gatherers whose *estradas* are at long distances from their camps, and who therefore cannot promptly smoke their rubber, resulting often in the curdling of the milk, will find Seringuina of great utility. It is sufficient to put a large pinch of Seringuina into each vessel of *latex*, to keep the latter in a fluid condition for 24 or 30 hours after it has left the tree. The fumigation, therefore, may be done at leisure.

In localities having no fuel for fumigation, Seringuina is

likewise of inestimable value. By preparing the milk with a small quantity of Seringuina and leaving it to coagulate in forms, a very fine elastic *sernamby* is obtained, having often all the properties of fine rubber.

When, for some unexpected reason, *latex* treated with Seringuina curdles, either because the quantity used was too small for the time during which it was to preserve the milk, or on account of the exposure of the latter to the sun or to artificial heat the resulting *sernamby* (coarse rubber) possesses excellent qualities.

RECENT REPORTS REGARDING "GUAYULE."

THE *Berliner Börsen Courier* learns that a syndicate consisting of the Dresdner Bank, the Deutsche Effekten- und Wechselbank (Frankfort o/M.), the Vereinigte Gummiwaaren-Fabriken Harburg Wien, and a large firm of exporters, having houses in London and Mexico, has converted a Mexican rubber factory into a stock company, with a capital of £100,000. The rubber works in question are manufacturing rubber from "Guayule" herbs, and have already obtained satisfactory results. Their products have been introduced into Europe and are said to have found a good reception on account of the scarcity and increased price of crude rubber.

Recent newspaper reports from Mexico relate to the acquirement of certain patents and other interests relating to the exploitation of Guayule, by a company described as L'Anglo-Mexicana, a large commercial organization having its headquarters in Hamburg, and formed originally to trade in Ixte and other fibers, both for manufacture and export, and which business is still carried on, being more important at present, of course, than the Guayule product. The company are reported, in a private communication to THE INDIA RUBBER WORLD, to have a capitalization of £400,000. The company are reported to have in view the operation of Guayule factories at San Luis Potosí, Torreon, Saltillo, and Jimulco, near which latter place they are already in actual operation.

The company referred to have acquired the patents of William Prampolini, about whose proposed work with Guayule extravagant reports were current two or three years ago. THE INDIA RUBBER WORLD at that time mentioned the establishment of a factory on a considerable scale at San Luis Potosí, but it cannot be learned that any rubber was ever produced there, and machinery is understood to have been removed from the building. It is not to be understood that L'Anglo-Mexicana are working the Prampolini process; they have simply acquired his patents as a step in controlling the Guayule interest as far as possible. They are reported to have obtained options on the collection of the Guayule plant throughout sections of considerable area around the towns mentioned. It is understood that L'Anglo-Mexicana are not connected in any way with the Continental Rubber Co. (New York), who are mentioned in another column in this issue, and who have done not a little experimental work in Mexico for some time past.

A COMPANY has been registered, under the style of Crotty's, Limited, with £6500 capital, in £1 shares, to acquire the business of Crotty & Co., 62, Grafton street, Dublin, and to carry on the business of India-rubber, Gutta-percha, asbestos, and textile manufacturers. There has not been a rubber goods factory in Ireland hitherto. Messrs. John B. & F. Purchase (London), solicitors of the new company, advise THE INDIA RUBBER WORLD: "Crotty's, Limited, do not at present manufacture India-rubber goods in Dublin, but they have power to do so under their memorandum of association."

THE COLORADO RUBBER RECORD.

IN view of the continued receipt of inquiries concerning the production of rubber from the Colorado "rabbit weed," a further record is presented herewith of what it has been possible to learn in regard to the development of the new industry. It does not appear that the Colorado product has yet found a place in the crude rubber market.

ONE
YEAR
AGO.

[From the Denver (Colorado) *Times*, February 19, 1904.]

Special to The Times.

SALIDA, Colo., Feb. 19.—The final deal was consummated this morning between the Salida Board of Trade and Dr. Sol Ringolsky, proprietor of the rubber extraction plant, now at the Modern Machine Works in Denver, whereby the machine will be set up at Salida for the manufacture of crude rubber. The plant will be shipped to Salida within the next few days and set up in the Creamery building, which is well equipped with machinery.

A
SECOND
START.

[From the Denver (Colorado) *Republican*, December 15, 1904.]

SALIDA, Colo., Dec. 15.—(Special.)—The work of setting up a rubber extraction plant in Salida was begun this morning by the Salida Crude Rubber Co. The machinery arrived last night, and the new mill will be operated within 15 days. . . . The Salida company has placed a number of workmen in the field who are gathering the root for the new mill.

UNTIRING
EFFORTS
BRINGING
RESULTS

[From the Salida (Colorado) *Chronicle*, December 16, 1904.]

As announced last week, the building for the Salida Rubber Plant has been made ready. A portion of the machinery has arrived, is installed, the fires in the furnaces kindled and the wheels set to flying. The remainder of the machinery is being manufactured as rapidly as possible. Contracts have been placed for the gathering of the rubber weed . . . This is the first and only rubber plant in the world in operation to manufacture rubber from the Colorado weed . . . The untiring efforts of the Salida Board of Trade to promote the possibilities of Salida are bringing results.

THROUGH
THE
FIERY
FURNACE.

[From the Salida (Colorado) *Mail*, January 31, 1905.]

EVERY new discovery of whatever nature is forced to pass through the fiery furnace of adverse criticism. It has to rise on its merits. So it is and has been with the Colorado rubber weed. Since its discovery it has been met with suspicion and has gradually emerged from obscurity into great prominence. Every month brings to light some new value connected with its usefulness.

IN
THE
FROZEN
GROUND.

THE SALIDA BOARD OF TRADE.

Organised May, 1902.

SALIDA, Colorado, Feb. 13, 1905.

THE INSOLOID FUSE CO., LTD.—Gentlemen: Your card requesting sample of "Crude Rubber" at hand. The mill for extracting the same has not started up yet and consequently we have none on hand.

The manager says he cannot do much until the ground thaws out so they can pull the plant.

Later on we will be glad to forward rubber. Very respectfully,

O. J. KENNEDY, Sec. B. of T.

BROOKLYN
CAN
GET
SAMPLES.

[From a letter of C. F. Carter of the Brooklyn *Daily Eagle*, to the Editor of THE INDIA RUBBER WORLD, dated January 25, 1905.]

DEAR SIR: Really I do not know why the rubber producers of Colorado do not allow you to see samples of their product. But I do know that I had not the slightest difficulty whatsoever, not only in obtaining all the samples

A
HARD
RUBBER
SECRET.

I wanted, but also in obtaining permission to watch the process of manufacturing the samples.

[From the Salida (Colorado) *Mail*, January 31, 1905.]

MR. O. J. KENNEDY, secretary of the Salida Board of Trade, has received a communication, dated January 18, from Buffalo, New York, people who wish their names withheld, from which the following extract is taken:

"I am interested in a process for abstracting rubber and Gutta-percha from many different plants, vines, grasses, woods, etc. We have been at work on the process for several years and can produce hard rubber from many substances in paying quantities. We have lately tested the Colorado rubber plant and pronounce it the best material for hard rubber—that is, it will produce it far cheaper than from any other substance of equal sort. We can obtain from this rubber plant a higher percentage than we have ever heard of."

WHAT
BROWNELL
DID.

[From the Brooklyn (New York) *Daily Eagle*, December 18, 1904.]

MYRON G. BROWNELL, a Denver real estate man, visited a friend engaged in the sheep business near Buena Vista. The friend had a valuable ram* that had carelessly been permitted to browse on rabbit weed, and a couple of weeks later died with the usual symptoms. At Mr. Brownell's suggestion a *post mortem* was held on the ram. The stomach was found to be filled with pellets of a black gum. This gum was perfectly indigestible, and so had caused death. Mr. Brownell had some of the substance examined by a Denver chemist, who said it was rubber.

*For a portrait of the ram, see THE INDIA RUBBER WORLD, January 1, 1905 (page 120).

WHAT
BROWNELL
DIDN'T.

[From the Salida (Colorado) *Mail*, January 10, 1905.]

ACCORDING to sworn affidavits of witnesses Brownell never dreamed of such a thing as a rubber plant, until Spencer, under promise from Brownell to give him a large bunch of money if he, Spencer, could show him the plant. He took him into the field and pointed it out to him.

THE CARE OF RUBBER TIRES.

IN view of the great number of automobiles stored during the winter months, the G & J Tire Co. (Indianapolis, Indiana) have issued "A Word of Advice" in regard to the care of tires when not in use, which we take the liberty of reproducing:

Extreme cold will not damage tires in any way, but great variation from heat to cold is injurious to tires which are not in use. Therefore, if a car is stored in a room that is artificially heated, the temperature should be kept as even as possible.

If the car is stored in a light place, it will be well to cover the tires to protect them from the strong light, which has a deteriorating effect on rubber.

The greatest injury that can be done to tires on a car stored for the winter, is to allow the weight of the car to rest on the tires. The car should be blocked up, so that no weight is borne by the tires, and the tires should then be deflated partially. This will relieve the tires of all strain, so that in the spring they should be no worse for their winter's storage.

F. B. PARKS, of No. 173 Prescott street, Grand Rapids, Michigan, the patentee of an inner tube for tires which is designed to be non puncturable, or at least self healing to a degree hitherto unknown, has contracted for its manufacture by the Alden Rubber Co. (Barberton, Ohio). Before making this arrangement Mr. Parks, who is the patentee of several other rubber specialties, had attempted to organize a company in Grand Rapids to make his tire.

A GLIMPSE OF JAPAN AND ITS RUBBER INDUSTRY.

By The Editor of "The India Rubber World."

THIS story begins in Nagasaki harbor, where lay the steamship *China*, with a varied assortment of Americans, Germans, English, Coreans, Chinese, Japanese, and one full fledged Russian spy for passengers. The harbor is one of the prettiest in the world; it is quite narrow, some three miles in length, with many bays and sheltered by wooded hills. The entrance, scarcely a quarter of a mile in width, is between a number of islands on which stand modern lighthouses. After the polite little Japanese health officers got through with us, we went ashore, hired rickshaws at 20 sen an hour, and rode about the town.

Everybody knows that the climate of southern Japan is lovely—that it is a land of cherry blossoms, with flowers blooming everywhere, and the happy laugh of the contented coolie is heard on every hand. At least that is what the books say, but truth to tell we rode through one thick snow squall after another, and the whole town shivered in its paper houses, while the people on the street looked blue and discouraged. We got back in time to see a great crowd of coolie girls coaling the ship. Some sort of conveying belt or mechanical apparatus might have been more modern, but it could not have been cheaper, quicker, or more picturesque. Passing the coal up in baskets from hand to hand, they put 1300 tons into the hold between 10 in the morning and 2 in the afternoon.

When this was finished, we went ashore again for a short time to see the big bronze horse in front of one of the temples, which, so we were told, was left there one night by an angel that brought it down from heaven. The angelic sculptor must have been Japanese, for his work was characteristic of the country. Almost at once we were struck by the prevalent ambition of the people to improve themselves. Very many spoke English and wisely improved every occasion to practice it. One of our passengers, a sedate Englishman, was first astounded and then convulsed when a young Japanese student approached with a text book of conversational English in one hand, raised his hat, and said pleasantly:

"Good morning sir or madam as the case may be!"

The day following was a memorable one, for the course of the boat took us through the beautiful inland sea, with its picturesque mountains, sugar loaf islands, and silvery beaches, with here and there quaint Japanese fishing and farming towns and many trading junks and fishing boats, big and little. The sea was smooth, the sun bright, but the wind cold enough to call for an overcoat. The total number of islands in this sea is not known, but it runs into thousands, of every conceivable shape, some wooded and some mere barren rocks, some with tiny villages on them, others with but a lonely shrine. Scattered in

all directions are they, but often lying so close together that there seems to be hardly room for the steamer to pass. In the wider reaches the water is very smooth, but in the narrow ones the current boils and eddies so that the utmost care is necessary to take a vessel through in safety.

When we got to Kobe a friendly merchant sent a steam launch to the ship and took us off early in the morning, giving us time to ride to the Sannomiya station and catch the train for Kyoto. The last named city is nearly 50 miles from the coast, and the journey gave us an excellent opportunity to see the Kamigata district. The land was far from rich naturally, but every inch of arable surface was cultivated, irrigated, and plotted off into what looked like thousands of toy gardens, the farms extending far up the sides of the mountains. Along the wayside were huge billboards on which were pasted the same kind of advertisements that one sees at home, along a railway, only in Japanese instead of English.

We passed through the great city of Osaka and finally reached Kyoto, where a three mile rickshaw ride, all the way up hill, the vehicle being drawn by one coolie and pushed by two others, took us to the Miyako hotel, where we had breakfast served by the prettiest waitresses imaginable. Pottery and porcelain are the chief manufactures here, the goods being largely for export. In visiting the works we were shown every attention, the choicest and most fragile articles being brought out for inspection. A line of work that is a specialty in this city is the famous Cloisonné product, usually made in a private house by the owner and two or three apprentices. It consists of

copper vases, etc., on which are brazed bits of gold, silver, and other metals, the result being most beautiful. One little vase that I coveted was marked 20 yen. I offered 8 and was firmly turned down. That evening, however, the manufacturer boarded the train as I was leaving, and, explaining that, I was not remaining in town to publish his name, it was mine at 8 yen.

For some reason it was not possible to visit the great Nijo castle, so we rode out to and around it. This palace castle, erected in 1569, is noted as the place where in 1868 the present mikado granted to Japan a full deliberative assembly, and the right to decide all measures by public opinion. The outside of the castle is grim and fortress-like, but within it is said to be a dream of golden magnificence.

San-ju-san-gen-do, the temple of the 33,333 images of Kwan, the Goddess of Mercy, and the great Daibutsu, (an image of Buddha consisting of head and shoulders only, yet 58 feet high), were visited in turn. We trod musical floors made of polished planking that gave out a faint sweet sound, rung the 63 ton



A VIEW OF THE INLAND SEA.

bell in the temple of Moho-in, visited the Buddhist, Shinto, and Zend temples until, sated with bronzes, paintings, and sightseeing, we rode back to the hotel for rest and dinner. Later we took a funny little sleeping car and started for Yokohama.

In the morning we said *Ohio* to each other and looking out saw the holy mountain, Fujiyama, and half an hour later had breakfast in Yokohama. It was then that my friend, Mr. Okada, of the Fujikura Insulated Wire and Rubber Co., of Tokio, looked me up and took charge of my itinerary. With such a guide the whole of Yokohama and the nearby great city of Tokio was most interestingly and easily developed. We visited temples, places of amusement, and shopped, and he capped it all by inviting me to dinner *à la Japonaise*. One of the pleasantest memories of my trip is that meal served in an elegant tea house where servants knelt and bowed themselves to the floor as we rode up, took off our shoes and shod us with gaily colored socks, then led us up a staircase of teak, polished like a mirror, into a dining room, carpeted with squares of straw matting inches in thickness and as soft as velvet. There seated on the floor, with a pair of chopsticks in one hand, I enjoyed a meal that for service and cooking cannot be surpassed anywhere. Nor must I forget the two charmingly dressed Geisha girls that were summoned by my host to dance typical Japanese dances, which he described to me so that they were not only understandable but most modest and beautiful.

My visit to Tokio, accompanied by Mr. Okada, was primarily to view his rubber factory and also to meet other members of the firm. My courteous host was full of regret that the factory was not at its best, as only a little while before my arrival a hurricane had demolished many of the buildings. However, he showed me what he had, and as repairs were being rushed rapidly, it was easy to see that it would soon be in first class shape again. I was very much interested to know about office hours, etc., and my host was exceedingly frank. His day's work began at 6 o'clock, with one-half hour for breakfast at the factory, another one-half hour for lunch in the middle of the day and an hour, still at the factory, for dinner in the evening, followed by work in the factory until 10 o'clock at night. This was his daily routine, and he had followed it for three years, with no Sundays or holidays out, and as far as I could see he was in the pink of condition.

His review of the rubber industry in Japan was most in-

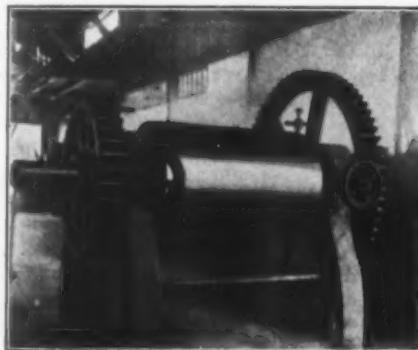
teresting. Seven companies are engaged in the manufacture of rubber and are as follows: Tokyo Gomu Seyzo Kaisha, The Meiji Rubber Manufacturing Co., Mitado Rubber Co., Nippon Rubber Co., and Fujikura Insulated Wire and Rubber Co., in Tokio; the Yokohama Insulated Wire Co., in Yokohama, and the Osaka Jushi Sheizoshō, in Osaka.

The largest of these is the Tokyo Gomu Seyzo Kaisha. It is also the oldest, being nearly 25 years old and employing some 250 hands. Their line of manufacture is mechanical rubber goods such as valves, gaskets, packing, and hose, their Para rubber coming from New York, while some other grades are imported directly from Java, Sumatra, Borneo, and Saigon. All of the machinery was made in Europe. In this connection it may be of interest to recall that some of the first rubber machinery made in Japan was designed by an ambitious rubber manufacturer there from illustrations he found in a mechanical dictionary. In the washer roll the corrugations were finer than is usual, but it washed rubber perfectly. The mixer would mix a small batch, but as no provision was made for heating or cooling the rolls, and as they were not proportioned as well as they might be, the machine could hardly be called a perfect one. Considering the material with which the manufacturer worked, however, both washer and mixer are veritable triumphs.

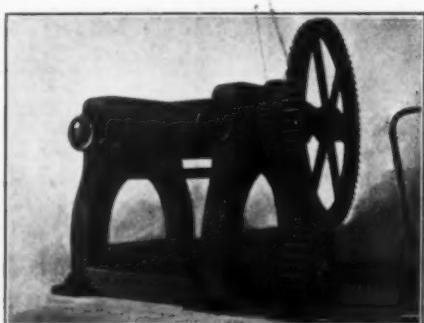
The rubber industry is not a large one. There are no boots and shoes manufactured, no clothing, very few druggists' sundries, and no hard rubber. Insulated wire is the chief product, followed by minor mechanical rubber goods, mold work, and some of the smaller novelties; for example, the Nippon Rubber Co. manufacture the rubber soled shoe shown in the illustration. There are, by the way, three types of shoes worn by the Japanese: the *sori* or straw sandal; *tabi*, or stockings, with a separation between the great and the other toes; and the *setta*, or wooden clogs. The rubber sole was made by some enterprising Japanese for the straw sandal and was really a good piece of mold work. The most interesting bit



BAMBOO LINED ROAD NEAR KYOTO.

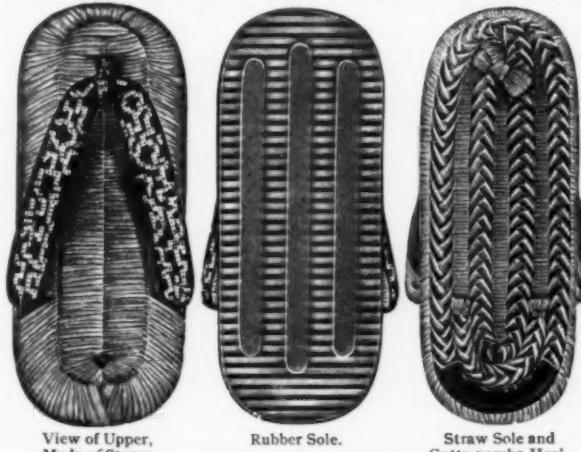


JAPANESE RUBBER MIXING MILL.



JAPANESE RUBBER WASHER.

of work, however, was the molded sole to fit the bottom of the *tabi*. That, so I was informed, was patented by the Nippon Rubber Co. The Oriental Rubber Co. started to make them, and, suit being brought, the court decided that the patent could not be sustained, as the sole was practically the same as

View of Upper,
Made of Straw.Rubber Sole.
ZORI, OR STRAW SANDAL.Straw Sole and
Gutta-percha Heel.

the tennis soles that had long been made in America.

There appeared also to be the beginning of a business in tires, chiefly of the solid type, for the rickshaw. Indeed, I was informed by an intelligent native that ere long the rickshaws through Japan and in the coast cities of China, Malaya, and southern India, would be fitted with pneumatic tires of Japanese make. During my journey, it was very apparent that the few rickshaws that were fitted with pneumatic tires



TABI (COTTON SOCK).

were always in use and far more agreeable to ride in than those without. One of the rubber manufacturers whom I met was deeply interested in the subject of rubber planting, and pointed out that if rubber could be grown in Formosa, with the cheap labor so abundant in Japan and so easily controlled, in a possession belonging to the country, it would be a most profitable venture. Since my return to America, in looking the matter up, I have no hesitation in saying that there are parts of Formosa that would lend themselves most readily to such cultivation, and I hope soon to hear that the Yankees of the East have begun to plant.

Manufacturers in the United States often look askance at Japan, wondering what that country will be industrially when it fairly wakes up. From my own observation I do not think the rubber trade, at least, need fear Japanese competition for some years to come. For their own needs, they will doubtless soon make the most of their own goods, but when it comes to entering the markets of the world, they will be facing a different problem. The need of great numbers of workers skilled



RUBBER SOLE FOR TABI.

in rubber will be one that will not be easily supplied. The Japanese are exceedingly ingenious, marvelously industrious, but the cheap labor, cheap though it is, is not to be compared with the high priced skilled labor employed in America.

The traveler in Japan is constantly confronted by the fact that he is in a country where the point of view is radically different from his own. For example, a burglar in one of the large cities robbed a man of 200 yen. He was apprehended later and, 40 yen being found on his person, it was given to the man whom he had robbed. A little later the robber appealed to the court and proving that he had spent the whole of the money he stole, and that the 40 yen was money of his own, he recovered the whole of it.

RICKSHAW PULLER, WITH STRAW RAINCOAT.

[An exceedingly cheap article, the use of which renders the demand small for rubber proofed clothing.]

My stay in Japan was necessarily brief. All the way from Singapore there had been war rumors; the Japanese passenger boats had been recalled to Japan, the American officers paid and sent home, and although the Japanese were very reticent and refused to discuss the possibility of war with Russia, no one doubted that the outbreak was near. Rather than be delayed in my journey home, I cut my visit short and embarked on the *China* for the Sandwich islands. Three days later war was declared, with what result all the world knows.

When a Japanese buys a pair of *tabis* or *zoris* the enterprising retailer wraps up the purchase in a thin paper circular which tells in detail of his unsurpassed stock and his desire for trade, just like our own retailer.



FAC SIMILE OF A JAPANESE CIRCULAR.

RUBBER PLANTING AND EXPLOITATION.

THE RUBBER PLANTING INTEREST IN CEYLON.

FRANCIS J. HOLLOWAY, manager of the Kepitigalle estate, Matale, Ceylon, writes to *The Times of Ceylon*: "During the past five years I have devoted a great deal of my time to rubber cultivation and curing, and during the year 1904 this estate has enjoyed the distinction of having the largest sale of seed and output of rubber of the island. We know that Pará gives over two pounds per tree in its tenth year, planted 15×15, or say 200 trees to an acre, and that it can be delivered in Colombo under 50 cents [=16.4 cents, gold] per pound and is selling at present in Colombo for between 4.15 and 4.20 rupees [=81.34½ to \$1.36] per pound."

These figures, compared with even the highest prices quoted for Ceylon rubber at the London auction sales, say 6s. 1d. [=81.48] would show that the margin of difference in price between the primary and consuming markets is very narrow, after the transportation cost is figured. Speaking of the Colombo market, the *Times* intimates that one or two houses there may take up the rubber export as a specialty, the output of the island having gone up last year to 72,000 pounds, with the prospect of a steady increase.

Writing later to *The Times of Ceylon*, the owner of a 300 acre rubber plantation, now three years old, says that selling rubber at present prices equals £100 profit per acre yearly, and that, capitalizing this at 10 gloss purchase, gives a valuation at £1000 per acre, or £300,000 for the estate, and he asks whether such valuation would be justified.

F. S. Penfield, an American visiting Ceylon, through *The Times of Ceylon* advises planters there, in taking up new cultures, to give a preference to rubber rather than to cotton, for the reason that while cultivation may ultimately result in over-production of rubber, the stage of overproduction of cotton has been reached already, and that a liberal rate of profit from cotton planting is no longer to be looked for as in the case of rubber.

* * *

THE Kalutara district was visited early in January by their Excellencies Sir Henry A. Blake, governor of Ceylon, and Lady Blake. At Tebuwana an address was presented by the Kalutara Planters' Association, pointing out the progress made in the development of that district, and the still further growth hoped for in connection with rubber planting, and requesting consideration of means for improving the facilities for transportation. At a breakfast tendered to the official visitors Mr. C. Henly, chairman of the planters' association, said that, while profits on tea were lower than formerly, "I do not think that there is any chance of our district being a abandoned just yet. We have a new product in rubber which promises to do very well, and in which very large extensions are now taking place. About 1100 acres were under this product alone at the end of 1903, some 2000 acres were planted in 1904, and much larger extensions are being made this year." Sir Henry expressed in his remarks to the association a lively interest in the prospect of profits from rubber, and afterwards spent some time in conversation with the planters on this subject. Their Excellencies next proceeded to Arapolakanda estate, owned by the Eastern Produce and Estates Co., Limited, where they were received by Mr. H. V. Bagot, the superintendent, and had an opportunity of seeing rubber trees tapped and the latex converted into commercial rubber. They were entertained over night on Narthupana es-

tate, at Neboda, at the residence of Mr. R. Morison, the superintendent.

* * *

MR. THOMAS PETCH, B. A., has been appointed government mycologist, to succeed Mr. J. B. Carruthers, whose work in relation to canker in rubber is well known to our readers, and whose transfer to the Federated Malay States was reported in the last issue of this Journal. Mr. Carruthers, by the way, paid a visit to England before taking his new post in Malaya.

=The Muwankande Cocoanut and Rubber Co. of Ceylon, Limited, formed with an authorized capital of 300,000 rupees [\$97,200], to acquire and develop Muwankande estate, in Kuruñegala. The property embraces 746 acres, of which 320 are reported to be under cocoanuts from one to nine years, and 73 in Pará rubber, planted in July, 1904. It is proposed to add 80 acres to the cocoanut area and to plant 273 acres in rubber. It is stated in the company's prospectus that the cocoanuts alone are expected to yield dividends on the capital. The initial issue of capital is 240,000 rupees, of which the vendor takes 85,000 in shares in part payment of the purchase money of 160,000 rupees.

=Mr. A. Van der Poorten, proprietor of several plantations in Galagedara district, devoted to tea, cacao, and cocoanuts, is mentioned in *The Times of Ceylon* as having spent a number of years in the Congo Free State, where he became familiar with African rubbers, and he has planted in Ceylon, by way of experiment, specimens of several species of *Landolphia*, and also *Clitandria Arnoldiana* (root rubber). Mr. Van der Poorten has considerable rubber growing on his estate in connection with other crops, including a few specimens of *Funtumia elastica* (an African rubber tree), reported to be just ready for tapping.

=Shipments of Ceylon rubber seed (*Hevea Brasiliensis*) were made lately from Rangoon (Burma) and Hong Kong.

MONTE CRISTO RUBBER PLANTATION CO.

INCORPORATED January 28, 1905, under Colorado laws; capital, \$100,000; to purchase 5000 acres in Palenque district, state of Chiapas, Mexico, and form a rubber plantation, open stores, and operate means for transportation in Mexico. Directors: Bruce F. Johnson, F. H. Badger, Harry M. Haines, Thomas C. Williams, F. J. Decker, and H. E. Badger, all of Greeley, Colorado; Frank A. Chaney and Peter D. Rothwell, Denver, Colorado; Charles D. Cooper, Portland, Oregon; Arthur L. Tipton, Butte, Montana. The registered office is at Denver, but directors' meetings will be held at the Greeley office.

REPORTED RUBBER PLANTING IN COLOMBIA.

An interesting reference to rubber is made in a report by the United States consular agent at Quibdó, Colombia. This town is located on the river Atrato, and is the market for the rich gold mining region of El Chocó, in the department of Cauca. The Atrato is an important stream, emptying into the gulf of Urabá, an arm of the Caribbean sea. The reference to rubber follows:

"Important as is the gold mining of the Chocó, its supremacy is being disputed by the rubber industry. Cultivated trees are now producing about a ton a rubber a day. Most of the negro farmers are planting rubber in a small way, and the total is very large. Formal planting on a large scale is being carried

on at a number of plantations, as Yankolomba, La Maria, Sa-laqui, Bebará, and Tanguf. The practice here is to cut the bark lightly with the *machete*, so as not to pass to the wood; the cut fills up with gum, which coagulates and is gathered the following day. Careful growers cut but a small portion at a time, so as to avoid weakening the tree, but can repeat the operation every two weeks or month, as desired. The strips, called 'chaza,' are gathered from the gashes and rolled together, and bring about 75 cents a pound in the New York market. Trees as young as 3 years are bled in some cases, but it is preferable to allow them to grow undisturbed for two years longer. Cultivated rubber here does not produce as much at a cutting as wild rubber, but the annual product is at least as great."

A VIEW OF CULTIVATED RUBBER IN MEXICO.

THERE has been distributed to the shareholders of The Obispo Rubber Plantation Co. a printed statement regarding the progress made on the estate of that company in the canton of Tuxtepec, state of Oaxaca, Mexico, during the last three years, under the management of the Republic Development Co. The principal feature of the book, however, is a series of 24 pictures reproduced from photographs taken on the property and designed to illustrate the progress of development from the first camp structures and the felling of the forests which then covered the property, to the setting out of the first rubber trees by the company and their growth to the present time. One comment which has been made regarding this book is that "Anybody can make photographs, but in order to photograph rubber trees the trees must first exist." There is reproduced on this page, on a small scale, one of the pictures referred to, regarding which the management state that it is a typical view of their planted rubber at the age of 2 years and 8 months, being a fair illustration of the even, clean, and sturdy growth of cultivated *Castilloa elastica* all over their property. These views indicate a healthful condition of the trees, and from their apparent size the soil must be very favorable. This plantation is the outgrowth of the work of Mr. Maxwell F. Riddle, whose connection with rubber culture and particularly with the companies above named has been referred to frequently in this Journal. The book of views here mentioned is copyrighted by Mitchell, Schiller & Barnes (New York), who have successfully financed the Obispo company.

WISCONSIN RUBBER CO.

[Plantation near El Salto, department of Palenque, state of Chiapas, Mexico. Office: Fairchild block, Madison, Wisconsin.]

[See the INDIA RUBBER WORLD, September 1, 1903, page 426.]

AT the first annual meeting of shareholders held at Madison on February 1, the reports showed that 1300 of the 5000 shares had been sold. John R. Markley, president, and Isaiah B. Miller, treasurer, of the Mexican Development and Construction Co.

(Chicago), who are developing the Wisconsin companies' plantation under contract, were present, and received the thanks of the company for the way in which the work had been carried on. The officers of the Wisconsin were re-elected: Professor Rasmus B. Anderson, president; Charles H. Hall, M. D., vice president; Samuel D. Merrick, secretary and general manager; Frederick C. Hutson, treasurer. The shareholders elected one of their number—Robert Hall, mayor of Brandon, Manitoba, Canada—to make the annual inspection of the plantation.

TO PLANT RUBBER IN HAWAII.

THE Nahiku Rubber Co., Limited, incorporated at Honolulu on January 25, with \$150,000 capital authorized, are the first company formed thus far to plant rubber upon territory of United States. The company have secured 800 acres of land at Nahiku, on the island of Maui, where the yearly rainfall is from 300 to 400 inches, and there is good drainage. There are now on the ground a number of *Ceará* rubber trees planted experimentally two, four, and six years ago, the yield from which, together with that of some varieties of *Ficus* in different parts of the territory, has encouraged the organizers of this company to undertake planting on an important scale. The company

purpose planting 60,000 *Ceará* rubber trees this year and 200,000 trees of different species next year, including *Hevea*, *Castilloa*, and *Ficus elastica*. The officers of the company are William W. Hall, president of the hardware firm C. O. Hall & Son, Limited, president; W. E. Shaw, vice president; Robert H. Anderson, director and manager; Dr. E. C. Waterhouse, director; Mr. Howland, auditor; H. L. Shaw, incorporator. Mr. Anderson is described as a practical rubber man with several years experience in Mexico, and both he and Mr. Hall, the president



VIEW OF RUBBER ON THE OBISPO PLANTATION.

of the company, have written to THE INDIA RUBBER WORLD enthusiastically in regard to the prospects of the new enterprise. The Honolulu *Commercial Advertiser*, of January 26, referring to the product of the experimentally planted trees, says that they "have developed a quality of rubber which was pronounced yesterday by a representative of one of the large mainland rubber companies to be of the very best."

KAMERUN (GERMAN WEST AFRICA).

THE latest report by the governor of this colony gives the following details regarding the exports of India-rubber, by districts, for three full calendar years and the first half of 1904:

YEAR.	Duala.	Victoria.	Kribi.	Total.
1901.....kilos	72,108	50,342	383,712	506,162
1902.....	24,662	46,481	283,166	354,309
1903.....	35,516	26,924	564,071	626,511
1904 (6 mos.)....	15,730	20,732	356,219	392,681

The principal source of Kamerun rubber is in the southern districts, which, year after year, produce a larger percentage of the total output. The governor predicts that the exportation of rubber from the colony will increase for some time to come, and that the cost of obtaining it will also increase, as it becomes

necessary to go further inland for supplies. His report says : "On account of the growing exportation, those regions which are nearest the coast will become more and more exhausted, as the destructive method of gathering has been practised everywhere up to the present time. But this abuse will tend to be suppressed by the administration, through appropriate restrictive measures and instruction which the administration is going to give to those engaged in the industry. It is also intended to systematically replant those regions in the neighborhood of the coast, and partial measures necessary to this end have already been commenced."

"HEVEA" RUBBER IN MEXICO.

TO THE EDITOR OF THE INDIA RUBBER WORLD: We are pleased to inform you that we have on Hacienda Batavia a hundred *Hevea* rubber trees, planted in June, 1900. A measurement of a number of these trees shows a circumference, 3 feet from the ground, of 11 to 18 inches. Four year old *Castilla elastica* show circumferences of 17½ to 27½ inches. These figures may be of interest for comparison with the measurements taken on your interesting trip to Ceylon. Wishing you the compliments of the season, I am, Yours truly,

EDWARD A. KUMMEL.

Resident Manager Batavia Co. (of Milwaukee, Wisconsin).
Jalapa de Diaz, Oaxaca, Mexico, January 7, 1905.

LECTURES ON INDIA-RUBBER IN IOWA.

THE University of Iowa, at Iowa City, has inaugurated a "university extension" course of lectures, to extend throughout the state, which has embraced this winter a series of talks on the "Plants that Serve," the idea being to supplement the study of botany at the university with suggestions of how systematic knowledge of plants and their products may be made of general utility. One of the lectures in the series, given by Professor Thomas H. Macbride, of the university, relates to the India-rubber tree, and the Cedar Rapids Republican mentions that this lecture was listened to by a large audience in that city on the evening of February 13. Iowa is far from being suited for the cultivation of any known rubber yielding species, but very many citizens of that state have become investors in companies formed to plant rubber in the tropics, and doubtless are prepared to listen with interest to any authentic information regarding the rubber tree, besides which they will probably be more interested than hitherto in the chief raw material entering into any rubber goods which they may wear or use otherwise. Professor Macbride's lectures are liberally illustrated by means of a series of lantern slides.

RUBBER FROM UGANDA.

THE general report on the Uganda Protectorate, of East Africa, for the year ending March 31, 1904, made to the British colonial office, while indicating a very considerable general increase in imports and exports, fails to show an improvement in the output of India-rubber, though there is a possibility that in connection with the land survey now in progress, and the incidental systematization of the licensing of rubber gathering, a larger production will result. The report says on this point : "Rubber has fallen from £3431 to £2795, entirely owing to the mortality from sleeping sickness on the Sesse group and other islands on the north of Lake Victoria, where the rubber industry first started and developed, and where the richest forests are situated. During the year permits to collect rubber in several of the inland forests were issued, but these have not yet had time to be thoroughly worked."—The administration is active in its efforts to have the native chiefs interest their subjects in the exploitation of rubber, and also in experimenting with the cultivation of various species, in addition to the native

Landolphia. The Pará rubber tree has shown an encouraging rate of growth and three acres have been planted to this species in the government botanic gardens.

GERMAN NEW GUINEA.

THE Neuguinea-Kompagnie, engaged in extensive plantation enterprises, had rubber trees under cultivation at the end of 1903 as follows :

Herbertshöhe.....	2,559
Friedrich Wilhelmshofen.....	81,000
Stephansort.....	130,485 214,044

FEDERATED MALAY STATES.

BATU CAVES Rubber Co., Limited, registered in London December 21, 1904; capital £30,000; to acquire the Batu Caves estate, in Selangor, and to grow India-rubber and other produce in Selangor or elsewhere. No initial public issue. Directors : T. N. Christie, J. McEwan, H. K. Rutherford, and R. Williamson. Registered office : 10 and 11, Limes street, E. C., London.

=Cicely Rubber Estates Co., Limited, registered in London December 20, 1904; capital £12,000; to acquire and develop the Cicely estate near Teloi Anson, in Perak, held from the government by H. A. W. Aylesbury. Directors : Dr. S. Rideal, C. De Winton, C. F. Deane-Drake, and H. W. Brett.

=Patent rights in Pahang have been granted to Mr. Fritz Freudweiler, a planter of Bila, in Sumatra, for his invention of a new punch for tapping rubber trees. It is claimed that by the use of this punch the trees can be so tapped for the extraction of the *latex* as to cause no damage.—*Straits Times*, December 24.

=The well known Mount Austin Pará rubber estate, in Johore, the property of the Tebrau Planting Co., Limited, has been sold by private contract to a local merchant firm, through Messrs. H. E. Coghlan & Co., estate agents.—*Straits Times*, December 22.

BRAZIL.

MR. JOSÉ PEREIRA CAVALCANTE has paid to the tax collector [at Manáos] the sum of 5000 milreis, being the transfer tax of 5 per cent. on the amount of 100,000 milreis [= about \$28,000 at the then current rate of exchange] for which Messrs. B. A. Antunes & Co. [of Pará] have purchased the Sant' Anna and Santa Luzia *seringais* [rubber estates], both situated on the river Jurú.—*Folha do Norte*, January 17.

=According to statistics which have been compiled, the municipality of Maranguape (Ceará), has, during the year just ended, produced 220,000 kilos of crude Manicoba rubber, thereby exceeding the production of former years.—*Folha do Norte*, January 13.

COLOMBIA.

ADORNADA Rubber Co., Limited, registered in London, January 13, 1905; capital, £8000; to acquire the interest of A. Jouve, of Bogota, republic of Colombia, over certain lands containing rubber trees, and to carry on the business of growers and exporters of rubber. No initial public issue. Directors : H. Aigoin, P. Dujardin, and T. Bonhote.

ZANZIBAR.

THE rubber trade consists of importations from the east coast of Africa, and exports to Europe. Custom house figures for six years show :

1897	642,404	pounds imported ;	312,489	exported.
1898.....	251,539	" "	234,522	" "
1899.....	322,521	" "	313,773	" "
1900.....	190,520	" "	190,311	" "
1901.....	223,474	" "	219,703	" "
1902.....	287,491	" "	305,105	" "
Total... 1,917,949	" "		1,575,900	" "

THE INDIA-RUBBER TRADE IN GREAT BRITAIN.

By Our Regular Correspondent.

IT has been suggested to me that an estimate of the extent to which the sale of foreign made tires has increased in England since the lapse of the Dunlop monopoly would prove of interest. In making any such estimate one has to rely largely on hearsay and opinions, because there are not,

THE MOTOR TIRE TRADE. to the best of my knowledge, any available statistics from which inspiration can be drawn. I imagine, however, that it is not far from the truth to say that the change in the general situation has not been one of any magnitude. Doubtless the names which the Michelin and "Continental" tires have made for themselves in the past act potently in securing for their respective proprietors an important share of British business. But if their field has been measurably widened by the expiry of the patents is another matter. As a member of the home trade put it to me: "Formerly the French and German tires could be imported only by their paying a royalty to the holders of the leading patents. But the first result of the expiry of those patents has been to open the field for home production to all who care to enter, so that prices have declined to a greater extent than the amount of the royalties formerly paid by the imported article. To retain an important amount of trade, therefore, our foreign rivals must meet the new competition in prices. Meanwhile, British manufacturers are in a position to claim to make as good motor tires as anybody else, and even better, and the British buyer will prefer the home makes as soon as he appreciates this fact. It would seem, therefore, that the only means by which continental firms can largely increase their sales is by means of a reduction in prices below those ruling at home, and in doing this the risk is incurred of lowering the quality. And this is fatal in the motor tire trade, no matter what may be true in some other branches."

The arrangement made between Messrs. David Moseley & Sons, Limited, and the Seddon Tyre Co. as regards manufacture still obtains, though the rubber firm have also a tire of their own with beaded edge, practically the Clincher tire. The Martin tire seems to have come to an untimely end, and there are one or two others of which nothing has been heard for some time. In one or two makes the thickness of the tread, which was advertised as an advantage, has had to be reduced, as trouble was caused by its giving way. In this respect I hear favorable reports of the motor tire made by the Radax company, of Blackley, Manchester. In this tire a thick tread is put on in a special manner which enables it to wear well and renders the tire practically non-skidding. I understand that the Swain Tyre and Rubber Co., of Bolton, successors to the Swain Tyre Syndicate, have discontinued the manufacture of the cycle tires which bore their name. The attention of the new company is now concentrated on motor tires made under the original Swain patents. They are said to be particularly advantageous for American single tube rims. The single tube tire can be taken off and the detachable double tube Swain tire substituted without any alteration to the wheel being necessitated. In fixing the tire, ordinary "butterfly" security bolts are put through the lug holes present in the rim. The Wedge Tyre Co., of Ancoats, Manchester, are engaged in perfecting a motor tire under their special process. The original patentee of the Wedge tire, Mr. Shepherd, I may say, died a week ago at an advanced age.

ELECTRICAL NOTES. THE ordinary electrical engineer is not as a rule remarkable for his knowledge of rubber, so I am not altogether surprised to find a lecturer at the Birmingham Electrical Club condemning rubber insulation, though it would be interesting to know on what grounds

he bases his contention that the better the rubber the more quickly it deteriorated. I was rather under the impression that it was the use of low-priced compounds which had brought rubber into disrepute as an insulator. No doubt in many cases of failure the rubber compound has been to blame, but also in many cases it has been unjustly indicted. When a breakdown occurs care is not always taken to exactly assign the cause; it is an easy way out of possible trouble to put it down to a defect in those rubber cables. The station engineer, however, may possibly be to blame, either for putting too high an electric pressure on the cable, or for laying the protective iron piping in a situation which permits of its corrosion. I have recently examined some iron pipes in an extremely corroded condition, and it is not at all surprising that a breakdown occurred. Whether from motives of economy or from indifference it is certain that the causes of a good many breakdowns are never thoroughly investigated and thus an opportunity of obtaining important information is missed.—With regard to the cable making companies, it may be safely inferred, I think, that Callender's Cable and Construction Co., Limited, will be interested in an important way in a company which has been formed in Milan under the Italian laws, called Candiana et Cie. Bitume Callender, a large share in the capital of which will be held by George M. Callender & Co., Limited, the bitumen manufacturers. The exact relation of the cable company with the other interests named I am not prepared to state, but the fact that bitumen enters to a large extent in their insulation work is well known.

PLANTATION RUBBER. I HAD an interesting chat recently with a gentleman who has a considerable stake in the rubber planting developments in the Malay states. His experience of rubber

of the West Indies I turned our conversation in that direction. With regard to the rubber plantations in Trinidad and other islands, the outcome of the experiments that have for so long been carried on and in the various botanical gardens he spoke rather disparagingly. The Pará tree does not seem to make much headway, and in his opinion it would be better to stick to the *Castilloa*. Some projected plantations in Trinidad have fallen through, or are in abeyance, for want of capital. My informant had nothing good to say of Ceará rubber, having been concerned in its attempted exploitation in Ceylon. One would have thought that the *Castilloa* would have been a better venture. The opinion has been expressed by a planter of experience in Ceylon that insufficient care is being taken in many instances to select suitable ground for the Pará tree and it is prophesied that some of the recently started plantations will come to no good. I give this opinion for what it is worth, but it seems of sufficient importance to mention. With regards to the Straits the main difficulty would seem to lie in the labor question, a serious deficiency being reported. It is interesting to note that the success which has attended the cultivation of the Lagos rubber tree (*Funtumia*) has led to

its attempted cultivation on a large scale. The tree is one of very rapid growth, and from all accounts it promises to do exceedingly well. It will be remembered that this rubber was exploited largely during Sir Alfred Molony's tenure of office in Lagos, but in succeeding years the exportation of the rubber very largely declined on account of the destruction of the trees. The embargo which was put on the collection for a period naturally led to stagnation in the exports, but 1904, when rubber collecting was again allowed, showed a satisfactory export.

IT was with much regret that I heard of the death of Dr. Weber, in America. It must be more than twelve years since I first came into contact with him, on his joining DR. C. O. WEBER the firm of Frankenburg in Salford, Manchester. Few who have had dealings with him can have failed to admire the enthusiasm and energy which characterized his original work on India-rubber, more especially in connection with analyses. Perhaps the German minuteness of detail proved somewhat wearing to readers of the technical press, in which his results almost exclusively appeared, and the field being largely an untrdden one, comparatively little discussion ensued at the time as to the reliability of his methods or the soundness of his theories. Henriques and Weber, however, have done great service in clearing away obstacles which hitherto impeded the progress of the rubber analyst, and it is noteworthy how at the present time quite a number of chemists, in Germany especially, have entered the lists as investigators in the field of rubber cultivation and technology. While my personal relations with the deceased were not of a close nature, I would emphasize the fact that he was always scrupulously particular in mentioning by name any authors whose figures he had occasion to use.

UP to quite recently Sicily has had practically a monopoly in the sulphur trade, America being her largest customer. It

is an interesting fact, and one not without importance to the rubber trade, that the United States have now commenced to produce sulphur, from the Louisiana deposits. These have long

been known, but on account of their depth and the unstable nature of the ground it has not been found possible to mine. By what is known as the Frasch method, in which the sulphur is melted by superheated water, and pumped to the surface, the difficulty has been overcome. The arrival of a cargo of this sulphur at Marseilles has aroused concern in Italy, and formed the subject of interrogations in Parliament. It certainly seems as if the big dividends earned by the Anglo-Sicilian Sulphur Co. will be seriously affected in the future.

FROM the general standpoint the lamentable situation in Russia does not call for notice in these columns, but from the

DISTURBANCES IN RUSSIA. particular point of view of the industries affected a word or two will not be out of place. References in the daily press to the "Russian-American Co." as among the factories affected by the strike are concerned with the big rubber company which I understand is the largest rubber concern in the world. A friend of mine who is closely interested in Russian business, informs me that there is no other Russian-American company in St. Petersburg; therefore there is no need to describe the firm in greater detail. My informant went on to say that he thought the rubber company would not be very eager to take back the men who struck work, as they thought their action ungrateful and unjustified in view of the fact that they were the best paid work people in St. Petersburg. With regard to the Russian-French Rubber Co., of Prowodnik, a few miles out of Riga, I am informed from inside that the men suddenly struck work on January 25, the action

being brought about by one or two agitators marching through the departments and calling upon the hands to cease work; the main reason alleged was, I understand, the desire for an 8 hour day. In common, of course, with the other industries, the rubber trade in Russia has thus experienced vicissitudes of great moment to the management; this demand for an 8 hour day seems to me to be of too radical a nature, having regard to what obtains in the world's industrial centers generally, nor can the inclusion of such a demand as part and parcel of a requisition for a constitution be considered as at all a politic proceeding. Of British rubber firms F. Reddaway & Co., Limited, of Manchester, who have large belting mills in Moscow, will be likely to feel the present disturbances in the greatest degree.

THE new price lists issued by the Dermatine Co., Limited, of Camberwell, London, call for a word or two of notice, more especially on account of the excellence and utility

DERMATINE. of the illustrations. In the valve list some special matter has been written by an engineering expert, detailing the best forms of guards and grids for condenser plants. My knowledge of engineering does not enable to say anything by way of criticism, but I feel that a price list which goes into such important detail on momentous and abstruse topics cannot fail to attract at the hands of engineers that heed of attention at which it aims. The rubber manufacturer may possibly be inclined to break a lance with the versatile compiler of the list with regard to some of his references, but no doubt there is much truth in what is said as to the decline in favor of rubber valves being attributable largely to the use of inferior rubber or to the supply of qualities unsuited for the particular purposes for which they were required. In a case of this sort expert knowledge must prove invaluable and there can be little doubt that where in this respect the Dermatine Co. have led the way others will show a disposition to follow.

SOME WANTS OF THE RUBBER TRADE.

[809] A SUBSCRIBER to THE INDIA RUBBER WORLD in Italy writes: "We would be much obliged if you could please indicate to us some firms or mine owners or manufacturers of Asbestine of your country."

[810] A jobbing house in Memphis, Tennessee, writes requesting to know who manufactures "a little rubber novelty on the market known as a 'Squeezit,' which article fits in the end of a sack of smoking tobacco and keeps the tobacco from wasting." The same inquiry comes from a subscriber in Cleveland, Ohio.

[811] A correspondent in Brooklyn, New York, writes: "I saw in your January issue an article on Gutta-Gentsch. You will kindly inform me where I can obtain samples of this product."

[812] A correspondent at Hempstead, New York, writes: "Can you give me the name of the English firm making Versian white and Vulcanine?"

[813] A correspondent in Brussels, Belgium, writes to ask where he can obtain the product *l'extrait russe Jackten* for use in the deodorization of Caoutchouc. One New York house reports in regard to the above: "No doubt Jucten extract, or oil of Rusci is meant." Another house reports: "The article wished is known as oil of birch tar, crude, which we believe is sometimes known as oil Rusci and is a Russian product."

ANSWERS.

[808] The N Tire Co. (No. 415 Dearborn street, Chicago) write: "In reply the inquiry for rubber dice boxes, we are pleased to state that we make these articles."

THE TROUBLE WITH AFRICAN RUBBERS.

BY J. W. C.

TO THE EDITOR OF THE INDIA RUBBER WORLD: It occurs to the writer that no satisfactory solution of the trouble with African rubbers is likely to result from the discussion now carried on in the columns of this Journal unless we cease guessing and begin at the beginning. The "beginning" takes us back to the African jungle, to the banks of the Congo, to the depths of the primeval forest. No one interested in the rubber manufacturing industry has to be told of the crude methods still followed in the securing of sap, and the almost total destruction of trees and vines yielding it, over large and steadily increasing areas in Africa. The change for the better that is reported from the South American field seems to have made little progress there. Then, too, the African country seems to contain a greater variety of plants from which *latex* is secured, and the product comes to market under a bewildering list of names, and each particular brand is individualized by the method of its gathering, location, its color, shape, and condition. Let us consider briefly a few of these:

Senegal and Bissao balls, from Senegambia, Soudan, and Bissagos islands, come in balls or sheets, outside surface black or brown; cut surface, rose color or white; filled with sand, bark and dirt. Loss in working 25 to 50 per cent.

Gambia bails, from the same source, black or brownish white; cut surface white or light rose color; filled with sand and bark. Loss 20 to 50 per cent.

Casamance, (Boalam) from Casamance river table land, comes in balls or sheets. Outer surface dark brown, cut surface, grey, cream yellow and reddish; filled with holes, sand and earth. Loss 40 per cent.; odor bad.

Niggers from Sierra Leone and Massai come in red, brown, or white balls; cut surface showing much the same color. Sometimes filled with earth and bark; sometimes quite clean. Loss 10 to 35 per cent.

Liberia comes in white, brown and black balls and lumps; cut surface of balls rose color and white; of lumps, green, yellow, and white. Quite clean as a rule. Odor of lumps very bad. General loss 20 to 40 per cent.

Accra, from the Gold Coast, comes brown or black, and cut surface shows yellow and brown; sometimes quite dirty. Loss 30 to 45 per cent.

Gaboon balls, from the French Congo, come in large and small balls, black or grey. Cut surface of large balls shows rose, blue, red; of the small, grey, white, or green. Contains bark and sand; odor bad. Loss 30 to 40 per cent.

Kasai rouge, from the Congo Free State, comes in small balls, color red, quite free from impurities. Loss 6 to 8 per cent.

Kasai noir, comes in pieces of irregular size formed of balls stuck together. Contains little sand or wood, but on the other hand is noticeable on account of quantities of volatile, fermenting substances.

Upper Congo (common) comes in balls, containing some bark and water. Loss 15 per cent. Upper Congo (white) comes in balls, and is very pure.

Equateur, from the Congo, comes in balls stuck together, quite free from dirt.

Lopori, from the Congo, comes in balls, and contains volatile and fermenting substances.

Aruwimi, Mongala, and Bumba come from Congo in large balls, contain large quantities of fermenting substances, show great loss in working, and are distinguished by a very bad odor.

This is certainly enough to make the average superintendent old before his time, unless he has the assistance of a chemist,

and he, doubtless, could write books regarding that "tired feeling," induced by each purchase of "Africans." With Pará he may, ordinarily, feel firm ground under his feet. The "personal intelligence system" has made some headway there, with encouraging results. Knowing that the *latex* contains substances liable to fermentation, the best known preventive is used, viz.: repeated action of moderate heat, to remove water and smoke producing carbon, which acts as an antiseptic, and possibly assists in the absorption of oxidized resin in the sap.

In Africa, on the other hand, the quantities of dirt, sand, and bark, in the gum marketed, tell the story of shiftlessness in gathering, and the putrid odor, and general condition of lack of intelligence or indifference in coagulating. In the Congo country the gatherer may smear the *latex* over his entire body, or upon his arm, as it exudes from vine or tree, or it may be allowed to drip upon the ground from which it is gathered with its accumulation of dirt and bark. Such a person will not be overscrupulous regarding what he gathers. The fact that the *latex* in the heart of the *Landolphia* is acrid, watery, and spoils quickly is a matter of indifference. It goes into his gourd or pail along with the rest.

In the matter of coagulation there seems to be a corresponding lack of intelligent direction. Brannt says that on the Congo "fresh sap is mixed with four or five times its quantity of water, upon which the rubber rises like cream, in a mass containing substances sure to result in fermentation, and deterioration." This shows the origin of one trouble to which Mr. Thornton has referred.

In Pernambuco, however, a solution of potash combined with alum is used to coagulate. Gum treated in this way loses its elasticity, becomes brittle, and the chemist will discover that the crystals on the surface are alum. In Madagascar and Gambia citric acid and sulphuric acid are used; in the Ivory Coast and Kamerun districts, sea or common salt. The use of salt to coagulate will frequently account for the large percentages of water in African rubbers. It appears, therefore, that the most satisfactory results are obtained by the use of smoke, artificial or natural heat, or salt, in coagulation, and that the use of alum, mineral or vegetable acids, and the addition of water will result in injury to the quality, if it does not altogether destroy the rubber.

This condition apparently emphasizes the necessity for chemical examination of all rubber before it is used in the factory. The "by-guess and by-gad" method relied upon with such confidence by some superintendents can hardly fail of disastrous results. If the chemist can tell whether acid was used in coagulation, so he can ascertain the percentages of resins, oxygen, etc. Mr. C. O. Weber, the eminent expert, directs special attention to the presence of resins: "Resinous impurities determine to a considerable degree the behavior, especially of the inferior brands, of India-rubber in practical working, and they are also supposed to have a marked influence upon the stability of the finished product."

Consequently it follows that the superintendent who from indifference, or lack of facilities, fails to ascertain the quantity of sulphur that will be absorbed by resinous substances in the gum used, and in consequence, diverted from the proper vulcanization of a given compound, must not be surprised if goods fail to cure properly.

That the presence of resinous matter in rubber is something to be reckoned with, and dealt with intelligently, is shown in this table, compiled from the experience of several authorities:

Pará.....	2 %	Kasai....	4 %
Congo.....	8.5 %	Lagos.....	4.5 %
Gambia.....	7.5 %	Lopori.....	3 %

In view of these particulars, therefore, it is apparent that the various rubbers should receive individual treatment. For example, the softer sorts of Africans should not be subjected to the same degree of heat as Pará. This is mentioned for the reason that many factories have but one dry room for washed rubber, which is frequently filled with different kinds and grades. An African rubber should be dried slowly. It will also be found that the strength and elasticity of such grades as Lopori and Congo will be conserved by keeping them out of hot water, using cold water only in cleansing and sheeting.

As to the future for the African product—should one consider the subject from the viewpoint of Mr. Georg Waldau, who wrote so interestingly in your January issue, on the "Extinction of African Rubbers"—there would appear little prospect for improving either method or quality. But Africa is a huge continent, its resources undeveloped, and the same cupidity that now seems bent on destroying the source of rubber supply for the sake of quick returns, will, later on, protect it that it may continue to be a source of revenue.

Cambridge, Massachusetts, January 7, 1905.

CARBON TETRACHLORIDE AS A SOLVENT.

BY WILLIAM F. DOERFLINGER.

CARBON tetrachloride is a heavy, colorless, transparent, mobile liquid, having a neutral reaction. Its taste is pungent, aromatic, and cooling. Its odor is agreeable and aromatic, resembling that of chloroform.

It is non inflammable and non explosive. Its vapor does not take fire, but it has the remarkable property of tinting a blue flame green and the green flame as intense blue. The vapors do not support combustion, but act in the reverse as a fire extinguisher. A few drops placed upon a burning alcohol lamp or on a wick of a burning candle extinguishes the flame at once.

The specific gravity of Carbon tetrachloride is 1.6; the boiling point 77° F. The liquid is insoluble in water, diluted alcohol containing less than 75 per cent. by volume of absolute alcohol and also in glycerine and the glycerides. It is freely soluble in acetone, glacial acetic acid, oleic acid, liquid carbonic acid and aqueous solution of carbolic acid, ethyl, and amyllic alcohol, chloroform and spirits of chloroform, carbon disulphide, benzol (benzene), ether and spirits of ether, aniline, oil of turpentine, petroleum and all petroleum products; also in fixed and volatile oils and oleoresins.

Carbon tetrachloride is itself one of the greatest of solvents. It dissolves oils, fats, resins, wax, India-rubber, Gutta-percha, ceresin, spermaceti, paraffin, stearin, varnish, paints, asphaltum, pitch, balsams, coal tar, pine tar, and soda and potash soaps. It also dissolves salicylic acid, carbolic acid, iodine, bromine, iodoform, bromoform, menthol, thymol, camphor, camphor monobromate, naphthalin, etc. It furthermore dissolves several gases, among others ammonia and hydrogen sulphides. It is not acted upon by the strong mineral acids and is not decomposed by an aqueous solution of potassa, which will, however, remove any carbon disulphide or hydrogen sulphide present. An alcoholic solution of potassa converts it into a mixture of potassium chloride and potassium carbonate.

Carbon tetrachloride is by nascent hydrogen gradually converted into chloroform, and by still further reduction into dichlormethane or methylene bichloride.

It is strongly recommended as an extracting medium. It is important to remember that in contrast with benzine, gasoline, etc. Carbon tetrachloride ($C Cl_4$) is a chemical unit or indi-

vidual, and in its recovery from the extracted fats, grease, etc., it is always obtained as the same chemical combination, with the self same properties; whereas in benzine or gasoline there are unavoidable losses to be sustained, particularly the valuable, very volatile parts, so that with a continued use of benzine the remaining less valuable ingredients, the heavier oils, must finally be enriched by important additions of fresh benzine or gasoline.

It may be objected, that, in spite of the undeniable advantage of Carbon tetrachloride, its present high price forms an insuperable obstacle to its extended use. A superficial comparison of the commercial values of different solvents would, at first, seem to favor the lower price solvents in preference to Carbon tetrachloride, and yet such acceptance is not warranted.

Although the prime cost at current prices of the amount of Carbon tetrachloride necessary to establish an extracting plant upon a running basis is indeed much higher than that of benzine, gasoline, or Carbon disulphide, the losses incurred in the use of the Carbon tetrachloride and the expense for steaming, condensing water, labor, etc., employed in the recovery are so much less than with either the other mentioned solvents that even in the face of the high price of Carbon tetrachloride the work may be performed at a greatly reduced cost, and without fire risk.

Again, it must not be overlooked that the oils and fats extracted are obtained in the highest degree of purity, absorbing none of the extracting medium whatever, not even the odor, which is most difficult to avoid in the employment of some grades of benzine, gasoline, and particularly with carbon disulphide.

It is particularly important in the manufacture of oils, from oil seeds, since the residue from the oil seeds, the so called oil cake, is not particularly relished by the animals to which it is supplied as food, when it contains the contaminations incident to the use of carbon disulphide. As a consequence the cakes are more difficult to dispose of than those extracted by Carbon tetrachloride.

An apparatus already installed for the recovery of the solvents, does not need to be remodeled for the recovery of Carbon tetrachloride, and since the distillation process may be likewise carried through in the customary manner, there are no expenses attending a trial of this new solvent.

Another remarkable property of Carbon tetrachloride is that it does not in the least affect the colors of fabrics. The most delicate colors, even aniline colors of silk, satin, laces, etc., are not affected in the slightest degree. A mixture consisting of equal parts of turpentine and Carbon tetrachloride cannot be ignited at ordinary temperatures. A mixture of 60 per cent. Carbon tetrachloride and 40 per cent. naphtha is likewise non inflammable at ordinary temperatures.

Carbon tetrachloride is shipped in steel drums holding 650 and 1400 pounds, although smaller packages usually can be obtained from the manufacturers for experimental purposes.

In a report on the French automobile trade, the American consul general at Paris, Mr. John K. Gowdy, writes: "Some interest is now being given to the construction of light and heavy motor vans for the delivery of goods, and it is anticipated that a great deal of business is to be done in this branch of the industry, there being more firms, no doubt, in need of conveyances for the delivery of goods to customers than private individuals needing cars for touring. The city of Paris now has street sweepers, fire engines, post-office vans, and dust carts propelled by motor."

ELECTRICAL EXHIBITION AT BERLIN.

AT the exhibition of apparatus and materials held in connection with the recent "silver" jubilee (twenty-fifth anniversary) of the Elektrotechnischer Verein, in Berlin, the *Gummi-Zeitung* noticed the failure to be represented of the leading German rubber manufacturers who are engaged in producing insulating materials. The one notable exception was the long established firm, Dr. Heinr. Traun & Söhne, formerly Harburger Gummi-Kamm Co., whose exhibit comprised some important novelties, which attracted no little attention and interest. There was, for example, corrugated and ribbed soft rubber tubing, the subject of the German patent (D. R. P.) 150,498.

The manufacture of such tubing the interior or exterior surface of which is supplied with elastic ribs, makes it possible easily to insulate flexible or rigid metallic tubing with a material that will adhere well. The use of such ribbed tubing offers the following advantages for the stringing of wires in metal tubes or other conduits: (1) The friction occasioned by stringing the wires is lessened; (2) the effects of atmospheric pressure, often a hindrance in the stringing of wires, are obviated; (3) uneven exterior or interior surfaces of metal tubes which are to be covered or lined, are no longer objectionable, because they are evened up by the elastic ribbed rubber tubing.

For electrical and chemical manufacturers, and for all those requiring tubing with absolute interior insulation, Dr. Traun's firm exhibited a self closing, conical device, making a tight terminal connection, supplied with threaded flanges, serving the purpose of insulating the circuit and protecting it from interior pressure.

Flexible metal tubing inwardly and outwardly lined and covered with corrugated or ribbed rubber tubing, makes a suction tube which will not get out of order while in use, and cannot collapse as a result of atmospheric pressure. Corrugated or ribbed rubber tubing, in connection with rigid or flexible metal piping, is especially adapted for high tension circuits on ships, in mines, chemical works, revolving flash-lights, etc. Flexible metal tubing, interiorly insulated—so called "Hydra tubing"—can be used to great advantage for pneumatic tools, and, in fact, in all cases where fluids or gases are to be conveyed under pressure without their coming in contact with metallic surfaces, and where absolute tightness is necessary.

As a substitute for pure hard rubber, which, in accordance with the "Jena" precepts, cannot always be used for currents of high potential, the firm exhibited an insulating material bearing the name "Isolast." This peculiar substance can be worked as readily as pure hard rubber, while, on being heated to 100° Centigrade and then set on fire, it will not carry the flame, as it becomes self extinguishing. This material will stand heat very well, and may be obtained in a condition of hardness similar to leather.

An improved and very perfectly insulating kind of hard rubber was likewise exhibited, adapted especially for the insulation of alternating high tension currents for large induction apparatus, such as those used in the production of *X* rays.

In its review of electrotechnical progress in Germany, our Dresden contemporary, after mentioning the first experiments in telegraphy made by Dr. Werner von Siemens, says that Gutta-percha was first used for manufacturing purposes in Germany in the year 1845, by the firm of Rost & Co., at Harburg a/d Elbe, whose works are still in existence. A few years afterwards the manufacture of vulcanized India-rubber was added to the Gutta-percha industry. We owe the introduction of this

branch of manufacture into Germany—where it has since grown to enormous proportions—to Dr. Heinr. Adolf Meyer, who died in Kiel in 1889. In the year 1851 he purchased, in company with his partner, Mr. Conrad Poppenhusen, the Goodyear patent for the manufacture of hard rubber, and established a manufacturing plant in New York. In Germany they used the plant of H. E. Meyer, the father of Dr. Adolf Meyer, this plant being at the present time owned by the firm of Dr. Heinr. Traun & Söhne. The first plant in Germany for the manufacture of vulcanized soft rubber goods was established at Harburg in 1856 by Cohn and Menier, now known as the Vereinigte Gummiwaren-Fabriken, Harburg-Wein.

In spite of the enormous importance of Gutta-percha and vulcanized India-rubber in the electrical industries, it is a curious fact that during the twenty-five years of its existence, the Elektrotechnischer Verein has published only *one* lecture on the subject of insulating materials. That lecture was delivered in 1898 by Dr. Böhlendorff, and dealt with Ambroin, used for currents of high potential.

"Throughout the exposition," says the *Gummi-Zeitung*, "we found that hard rubber was used as an insulating material by all exhibitors of electrical apparatus. We have therefore come to the conclusion that in the construction of electric devices, hard rubber occupies the highest rank as an insulating material, because electrical engineers appreciate that it possesses more desirable qualities than any other substance. --- The ideal insulating material, in the eyes of the modern electrical engineer, would be a non-combustible substance, molded and bent as easily as India-rubber or Gutta percha, and which, besides, would not be hygroscopic (not influenced by conditions of moisture), and would act, in regard to contraction and expansion—within the limits of normal temperatures—like a strong, resistant, low priced metal of low specific gravity. Such an ideal insulating material, however, has not thus far been discovered."

A LANGUAGE STUDY ON RUBBER.

[FRANCIS E. LEUPE, IN "THE EVENING POST", NEW YORK.]

PERSONS who are interested in the development of word meanings will find few in our language which have had a more curious history than India-rubber. It gets its last name from the use to which it was first put—that of erasing pencil marks by rubbing. "India" it gets just as our Cherokees did their name Indian. The tree was first described by an explorer in Mexico three centuries ago, while the first account of the substance occurs in connection with Columbus's visit to Haiti on his second voyage. As Columbus and the explorers who followed him were searching for a short passage to India they naturally opened the way for the perpetuation of this mistake.

The fact that the use of this gum to rub dictated its original name, has led to some extraordinary uses of the term rubber, especially in the breezy vernacular of the day. A person who projects his head forward to listen is said to "rubber." Speaker Cannon talked disparagingly of "rubber currency." This was his interpretation of the word "elastic." Among his congressional associates the same commodity has been many times used to typify certain of their characteristics as statesmen. "Gumshoe Bill" is the affectionate title by which the junior senator from Missouri, the Hon. William J. Stone, is called by his loyal constituents. "The celebrated rubber-tired statesman" is the familiar term in the Western newspapers to signify one who gets over the ground without much bumping and jolting. These are quite remote descendants of the infinitive "to rub."

THE LATE DR. C. O. WEBER.

THE career of the late Dr. Carl Otto Weber was the subject of a paper read before the American Chemical Society, at a recent meeting in Boston, by Mr. Arthur D. Little, a member. From this paper some extracts are given below, bearing upon the interesting personality of the distinguished chemist; the purely biographical details are omitted, to avoid duplication of facts given in our sketch of Dr. Weber printed last month. Mr. Little said :

" - - - I first met Weber about five years ago in Manchester. He was then chemist and manager of the Greengate Rubber Works, one of the largest in England. The manufacture of rubber goods abroad is not specialized to anything like the extent which obtains here, and it would probably be impossible to find in the United States, though I speak without information, any works devoted to the manufacture of so great a variety of rubber products as this great English plant. Weber thus became practically familiar with the making of rubber shoes, mechanical goods, mackintosh cloths, hose, cables, and many other things to an extent which could hardly fail to a rubber chemist here. His work was of course mainly concerned with the daily intricacies of this complex manufacture, and it left him little time for research. To what good use that little time was put his patents, his book, 'The Chemistry of India-rubber,' and his many published papers show. I remember that at the time of our first meeting he was especially pleased with the results he had obtained in printing with aluminum inks colored silk patterns on the rubber side of unfaced mackintosh cloths. The fabrics could hardly be distinguished from the silk lined cloths a foot away.

" I remember also that he was then following the degradation changes which occur in the working of rubber by a series of molecular weight determinations by the boiling point method on the rubber in its different stages of manipulation. This struck me at the time as a beautiful adaptation of the methods of pure science to technical work. The whole subject of the colloids had an absorbing interest for him. He regarded them as being, as undoubtedly they are, the connecting link between living and dead matter, and the great volume in which Graham's researches were published were always on his desk. I still hold vividly in mind one night at Blackpool when Cross, the cellulose chemist, Weber, and myself sat up till 3 o'clock stretching chemical theory until it broke, and all the talk was of the colloids. On Weber's part it was a memorable display of the scientific imagination directed and controlled by the cold logic of fact. I saw another side of the man during a week's end at Windermere in the beautiful English lake region. He was keenly responsive to every changing phase of nature and alive to all the associations which English literature has thrown around that region.

" The work which first brought us together had to do not with rubber but with cellulose, and though this was my own specialty and a somewhat alien subject to him, Weber quickly made me feel that I must be very sure of my ground before each step. Cellulose was a colloid, and he claimed all colloids for his province. He introduced me to Bütschli's work and pointed out again and again how the peculiarities of plant structure might be traced to the colloidal character of cellulose. He devised the first process for the preparation of cellulose acetate in commercial quantities and was the first to prepare any of the higher fatty acid esters of cellulose.

" I shall have sadly failed if I have not yet made clear to you that Dr. Weber was a remarkable man. I would like to give you his personal history in some detail but that unfortunately

I cannot do. - - - His ancestry was largely German, largely Scotch, and for generations one of the sons had entered the ministry as a matter of course and family tradition. I had always found it difficult to orient him with the Germans. He used to say himself that in his man's estate he could not hope to remain out of jail three months in Germany, and I remember very well the delight with which I learned that the Scotch were so largely responsible for his being. It explained so many things. He was more Scotch than German in appearance. He had the Scotch love of controversy and the German imagination, German science, German music. As a Scotchman he studied theology, as a German he studied philosophy and poetry and music; then he studied chemistry. How many of us here to-night can say that our own chemistry might not have builded better on such a foundation.

" - - - In Colombia he studied the gathering and curing of rubber upon the spot. He was able to prove there that no rubber exists in the fresh *latex*, that it is an oxidation product, and that the coagulation of the *latex* is due to albumenoids and not to rubber. He prepared there and brought back with him samples of rubber as clear as celluloid.

" - - - Shortly after his return to England from Colombia the Hood Rubber Co., in what has always seemed to me a spirit of unusual liberality and appreciation, made definite overtures to secure his services for a term of years, upon terms which not only promised a competence by the end of the period, but best of all offered every facility and incentive for the research work he had had so long in mind. He took this tide in his affairs at flood and came to Boston. The establishment of the India-Rubber Research Laboratory at No. 19 Columbia street immediately followed, with Dr. Weber at its head. It was one of the very best working laboratories I have ever seen and it is where he left it. The laboratory is there but the directing mind is missing.

" - - - Chemistry suffers in the popular estimation because it is assumed to touch life at fewer points than the professions of theology, the law, or medicine. As chemists we are inclined to accept that estimation. But the dignity of his profession was always in Weber's mind and because of his influence during his few months in Boston we may each take new pride that we are chemists."

BRITISH ENTERPRISE IN BRAZIL.

UNDER the above heading *The British Trade Journal* (London) prints a letter from a correspondent at Pará, in which the preëminence of British trade in northern Brazil is referred to in detail. It is stated that fully two-thirds of the goods on sale in the stores of Pará and Manáos come from Great Britain, and that "public confidence in British houses and British methods of conducting business is undoubtedly firmly established and wholly unassailable." The more important undertakings in the way of public enterprise are in English hands, such as the city tramways and electric and gas lighting in Pará, the Manáos Harbor, Limited, and the Amazon Steam Navigation Co., Limited. The Manáos Harbor company, which handled 300,000 tons of goods last year, all of which paid tribute to it, is described as being intimately connected with the Booth Steamship Co., Limited, of Liverpool, who possess a practical monopoly of the cargo and passenger carrying trade between England and the Amazon. The correspondent asserts that money is being made fast in Pará and Manáos, and is being invested freely in new buildings and other improvements. He predicts a rapid expansion of business and points to the promise of good returns on British capital.

NEW GOODS AND SPECIALTIES IN RUBBER.

THE "CENTURY" ADJUSTABLE ATOMIZER NO. 10.

THE atomizer illustrated herewith possesses some important advantages which are peculiar to it. The principal advantage consists in its ability to spray two liquids from the same atomizer, the large outside bottle being used for the aqueous liquid, and the small vial which slips inside it for spraying minute quantities of heavier liquids. By a simple adjustment of the spray tip this atomizer is regulated for either liquid. As will readily be seen, this arrangement saves the expense of two separate atomizers, while each liquid is kept entirely distinct, and can be used



without waste. It is recommended especially for catarrhal cases, where the use of a cleansing liquid is generally followed by healing spray composed of an oily preparation. [The S. H. Wetmore Co., No. 240 Pearl street, New York.]

THE "HYGEIA" NURSER.

As the illustrations show, the "Hygeia" nurser, which has lately been introduced to the trade, consists of two parts, a breast and a cell. In this it differs from the ordinary nursing bottle, which consists of a bottle with a neck, to which a nipple is attached. The "Hygeia" nurser can be filled without a funnel, and cleaned without a brush, just as a tumbler is cleaned. The nipple is not a nipple at all, but is in form and function just like a mother's breast. It is made of the best rubber, seamless, reinforced, and reversible. It is yielding, like an air cushion, it is noncollapsible, and can be turned inside out

for cleaning. One advantage of the likeness of this device to the natural breast is that many infants will go from one to the other without seeming to appreciate the difference. This is an important feature, especially at weaning time, or when there is a deficiency in the natural supply of milk, making necessary an artificial accessory. The same firm supply sterilizers fitted especially for this device. [The Hygeia Nursing Bottle Co., No. 242 Ashland avenue, Buffalo, New York.]

ROJO'S ASEPTIC RUBBER DAM HOLDER.

THE name "Aseptic" has been applied to this new holder for dentists' use for reason that, unlike other rubber dam holders, the elastic tape connecting the metal plate may be separated readily and instantly from the plate, thus enabling them to be disinfected by themselves. In this way the tape is not affected injuriously by the sterilizing process. This device is adapted for holding a napkin by means of springing clasps, so that the patient is not incommoded by frequent rearrangements, as might be the case were the napkin



loose, and this facilitates the work of the dentist himself. Moreover, this new shape is designed to best receive the pull of the tape and thus hold the plates in proper position. The dam is easily applied and adjusted by simply stretching it over the projecting ears of the plates. This is the invention of Dr. Jose J. Rojo; a patent has been applied for. [The S. S. White Dental Manufacturing Co., Philadelphia.]

NO. 126 "BARCLAY" ATOMIZER.

THIS new article—a continuous spray atomizer for medicinal use—does not differ in construction from the No. 26 Barclay atomizer which has been on the market for some time past.

It has a straight tip and screw cap fitting of hard rubber, as indicated in the illustration, and a bulb and tubing of soft rubber. The distinctive feature of the new atomizer is in the use of black rubber for the soft parts, as being less likely to become soiled through use, and thereby insuring the continued good appearance. [Whitall Tatum Co., Nos. 46-48 Barclay street, New York.]

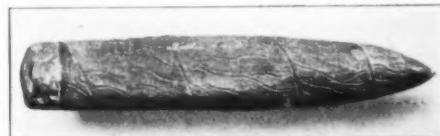
THE "CANTON" RUBBER SOAP TRAY.

THIS article is offered for the appreciation of those who have been troubled with the porcelain or china soap dish slipping from a marble washstand into the bowl, with a clatter and usual breakage.

Its character prevents slipping, noise, and breaking. It is made of a good quality of rubber, and the standard color is a rich maroon. It may be ordered if desired in white or black, but maroon will be sent unless otherwise specified. [The Canton Rubber Co., Canton, Ohio.]

COUNTERFEIT CIGARS.

EVERY smoker knows that there are cigars and cigars, and very few good ones. Exactly what genius it was that invented



the rubber cigar, no one seems to know. As the illustration shows, it has a certain likeness to a real Havana. Its color is all right, and even the white ash at the tip gives it quite a realistic effect, but exactly how any smoker could be deceived by it does not appear. These cigars are turned out by a little German rubber factory and they are displayed in the windows of many European rubber stores. It is possible, of course, that some inveterate smoker might buy an article of this kind, which is thoroughly "anti-nicotine," and make believe smoke

when self deception was necessary, but the prediction that the rubber cigar will ever come into common use is wholly without basis.

BATHING CAPS FOR DOLLS.

IT is when winter has its strongest hold that supply houses everywhere are laying in a stock of summer goods. Just how many of them carry doll's bathing caps is a question, but next season's sales are already beginning; and it is pleasant to feel that during the coming summer no doll, even if she be without

wealth or kindred, need take her daily dip in the ocean with her flaxen hair unprotected. The illustration shows the only doll's bathing cap that the Four Hundred wear, and is manufactured by Parker, Stearns & Sutton, New York.

"BENTON" PNEUMATIC GUN RECOIL PAD.

THIS new pad is composed of 66 cube shaped air cells each independent of the other and hermetically sealed. It thus re-

tains the natural atmosphere; in other words, it is a cushion of air and rubber that protects the user from injury caused by recoil of the gun. While it is purely pneumatic, as will be seen by the illustration, at the same time the pad is not inflated, and punctures or tears do not materially affect it. There are involved no valves, no pumps, and no rubber tubing; the pad is always ready for service and cannot get out of order; and it is referred to as being made of a fine grade of rubber. It is the subject of United States patent No. 779,461. [American Pneumatic Cushion Co., No. 221 Canal street, New York.]



NEW TRADE PUBLICATIONS.

THE GUTTA PERCHA AND RUBBER MANUFACTURING CO. (New York) signalize the beginning of their second half century in the industry by the issue of their Catalogue No. 75, devoted to Mechanical Rubber Goods. This catalogue, while including all the staple lines of mechanicals, gives special prominence to a number of articles which either are not included at all in the catalogues of some other companies, or receive only scant mention in them. For example, the first item is Vanner Belts, besides which elevator belting, conveyor belting; air drill, brewers', oil, pneumatic, and divers' hose are specially mentioned. The company's new vulcanized mosaic multi-colored Tiling leads in the very full department of Mats and Matting, and, of course, the "Maltese Cross" brand of fire hose has full attention. Fire hose accessories, rubber covered rolls, billiard cushions, and the like complete the list. [6" X 9 1/4". 78 pages.]

OSGOOD SAYEN (Philadelphia) issues a new Catalogue of Specialties, including "Torpedo-Asbestos" packing, "Johnson" patent vulcanite rubber packing, and various other lines of packings and hose, together with the well known "Johnson" patent vulcanite rubber valve. The right for manufacturing the Johnson specialties is now owned by this house. [5 1/4" X 7 1/4". 18 pages.]

THE HARTFORD RUBBER WORKS CO. (Hartford, Connecticut) issue a book descriptive of the Turner Endless Solid Tire, with illustrations of the different styles and prices, which go as high as \$265.50 per tire for the size 60" X 7 1/8". [3 1/2" X 6". 21 pages.]

THE Philadelphia branch of the CONSOLIDATED RUBBER TIRE CO., F. A. Kissell, manager, under date of February 10, sent out a handsome brochure entitled "Ten Prosperous Years," by way of commemorating the tenth anniversary of the agency referred to.

BANNER RUBBER CO.—Successors to Monarch Rubber Co. (St. Louis, Missouri) issue an illustrated catalogue of their "Sunset" and "Prairie" brands of boots and shoes, which contains full details of their plan for selling direct to the retailers. They announce that they do not sell to jobbers, and the advantage to their customers of the new plan outlined at length. [6 1/4" X 10 1/4". 36 pages.] Also: Price List and Discount Sheet. 4 pages.

MERCHANTS' RUBBER CO.—William Morse, president (New York), have issued their yearly catalogue of Rubber Shoes and Clothing, which, as usual, is comprehensive, as well as attractive in appearance. A point of interest to be noted is the prominence given, in the pages devoted to clothing, to Cravette rain coats. [6" X 6 1/4". 63 pages.]

THE FAULTLESS RUBBER CO. (Akron, Ohio) have issued a booklet describing the "Faultless" seamless rubber goods, including fountain syringes, rubber gloves, and other specialties. Prominence is given to the company's "American" rubber sponge, besides which there are toilet brushes and other items in this line. [6 1/4" X 4 1/4". 20 pages.]

THE NATIONAL CEMENT AND RUBBER MANUFACTURING CO. (Toledo, Ohio), who began in the early days of the bicycle trade, the manufacture of rubber cements and accessories for bicycle repairs, have extended their trade to adapt it to the automobile era. Their 1905 catalogue embraces a number of grades of cements for the purposes above indicated, together with tire tapes, braziers, vulcanizers, and the like; also, cement for use in the cobblers' and other trades. [4" X 7". 72 pages.]

THE CANTON RUBBER CO. (Canton, Ohio) have issued a new edition of their list of seamless rubber goods, which they designate "Catalogue C." In addition to the druggists' and household sundries listed hitherto, the present catalogue includes several toilet novelties—rubber bath brushes and the like; a new patent tire for baby carriages, which branch of the trade is of no mean extent, and also rubber toys and balls. [5 1/4" X 7 1/4". 28 pages.]

ALSO RECEIVED.

C. J. BAILEY & Co., Boston.=Bailey's "Won't Slip" Automobile Tires. 8 pages.

The B. F. Goodrich Co., 7, Snow hill, London.=Hot Water Bottles. 4 pages.

Marble Safety Axe Co., Gladstone, Michigan.=Marble's Specialties for Sportsmen. 32 pages.

Fox, Fultz & Co., Boston, and Lillibridge-Weeks-Thurlow Co., New York.=The Druggist Sundryman. October, 1904. 32 pages.

Foster Rubber Co., Boston.=The Foster Rubber Heel and Sole. 4 pages.

The Gilbert Manufacturing Co., New Haven, Connecticut.=Automobile Fabric Supplies. 6 pages.

Land- und Sekabelwerke Aktiengesellschaft, Cologne, Germany.=Circular descriptive of insulated wire and cable products. 4 pages.

Boston Belting Co., Boston.=Rubber Covered Truck Wheels. 6 pages.

The Faultless Rubber Co., Akron Ohio.=Indispensable Requisites for Protection of Hands. [Rubber Gloves.] 6 pages.

Chicago Pneumatic Tool Co., Chicago.=Something Pneumatic. September, 1904. 20 pages.

The Republic Rubber Tire and Shoe Co., New York.=Price List for "Republic" Non-Skid [Tire] Covers. 4 pages.

Rubber Appliance Co., Springfield, Massachusetts.=The Water Tank and Wash Basin (combined). 4 pages.

RECENT RUBBER PATENTS.

UNITED STATES OF AMERICA.

ISSUED JANUARY 10, 1905.

NO. 779,404. Life preserver for railway cars. [Comprising coils of spring wire, with elastic coverings.] W. W. Annable, Grand Rapids, Mich.

779,444. Pneumatic tire [having a sheath of strong, tough hide between the air tube and outer cover]. B. C. Rowell, Chicago.

779,505. Vehicle tire. C. Stein, Akron, Ohio.

779,536. Combination tile for floor, walls, etc. J. T. Dickey and G. D. Derby, Barberton, Ohio.

779,561. Storm front for vehicles. H. D. Pursell, Washington Court House, Ohio.

779,567. Reservoir attachment for pens. H. Tartsch, Konigsburg, Germany.

779,578. Tire cover [or fabric tire case]. F. E. Bowers, New Haven, Conn.

779,582. Nipple holder for nursing bottles. F. C. Brooke, Chicago.

779,588. Wheel tire [comprising tubular layers of textile material and a plurality of helical springs, the whole being encased in a covering of rubber]. J. S. Cushing, Norwood, Mass.

779,666. Belt conveying apparatus. T. Robins, Jr., assignor to The Robins Conveying Belt Co., both of New York city.

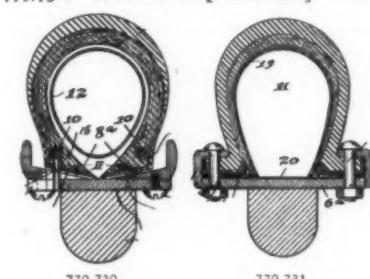
779,692. Fountain pen. J. H. Crowell, Vineyard Haven, Mass.

779,696. Process of and apparatus for the separation of gum from rubber plants. F. Ephraim, assignor of one-half to A. Raas, both of San Francisco.

779,702. Pneumatic tire for vehicles [comprising an outer tube and a series of inflated oblate spheroidal balls contained under pressure within the casing]. S. W. Fuller, Malden, Mass.

779,730. Vehicle tire. [Pneumatic.] J. Neary, assignor to Kokomo Rubber Co., both of Kokomo, Ind.

779,731. Vehicle tire. [Pneumatic.] Same.



New York city.

779,849. Folding storm shield for vehicles. C. M. Harvey, St. Louis.

779,894. Combined eraser and pencil sharpener. C. Wetzel, Chester, W. Va.

779,974. Cushion heel. F. W. Sharpe, Denver, Colo.

ISSUED JANUARY 17, 1905.

780,044. Rubber tire [solid; endless; adapted to a channel rim with removable side flanges]. A. S. Krotz, Springfield, Ohio, assignor to Consolidated Rubber Tire Co.

780,051. Detachable tire cover. F. Mesinger, New York city.

780,077. Medical vaporizer. J. E. Van Ness, Chicago, assignor of one-half to S. W. Gage, Evanston, Ill.

780,140. Air tube for pneumatic tires. J. R. Taylor, Wandsworth Common, England.

780,154. Rubber tire [solid; retained by means of bolts passing through the rubber and the flanges of the channel rim]. C. H. Bryan, Chicago.

780,155. Rubber tire. Same.

780,209. Fastening for wheel tires. A. Von Lüde, assignor to Mittel-

deutsche Gummiwaren-Fabrik Louis Peter, Frankfort o/M., Germany.

780,274. Horseshoe. C. F. M. Fish, Chelmsford, Mass.

780,416. Fountain pen. A. Eberstein, Winthrop, Mass., assignor to C. Brandt, Boston.

780,421. Dress shield. V. Guinzburg, New York city, assignor to I. B. Kleinert Rubber Co.

780,424. Inhaler. T. Heryng, Warsaw, Russia.

780,452. Pneumatic tire. W. Struck, Friedenau, assignor to B. Polack, Waltershausen, Germany.

780,457. Tire fastener. E. L. Thomas, Buffalo, N. Y.

780,462. Pneumatic tire. W. W. Walter, Aurora, assignor of one-half to J. D. Miller, Geneva, Ill.

ISSUED JANUARY 24, 1905.

780,495. Metallic packing [consisting of a core of metal threads, covered with a composition of rubber and graphite]. E. L. Clark, Auburndale, assignor to H. J. Livermore, trustee, Medford, Mass.

780,513. Holder for overshoes, rubbers or the like [to keep them on the feet of the wearer]. A. E. Lotstrom, Burlington, Wash.

780,518. Machine for cleaning carpets, rugs or similar articles. S. B. and S. G. Mead, assignors to The American Pneumatic Carpet Cleaning Co., all of Cincinnati.

780,519. Pneumatic tire. W. J. and J. R. Mitchell, assignors to Flexible Metal Manufacturing Co., all of Lynn, Mass.

780,551. Hot water bottle. B. J. Craggy, Manchester, N. H.

780,563. Eye irrigator. F. E. Girard, Toledo, Ohio.

780,582. Golf ball. F. H. Richards, Hartford, Conn.

780,632. Moth and bug proof receptacle for clothing. W. D. Ballou, Belding, Mich.

780,667. Cutting machine for rubber type or the like. B. F. Kern and W. J. O. Johnson (said Johnson assignor to H. S. Folger) both of Chicago.

780,684. Chair tip. P. W. Pratt, Boston.

780,710. Nozzle for [vaginal] syringes. H. Dickinson, Flushing, N. Y.



780,462.



780,551.

ISSUED JANUARY 31, 1905.

780,972. Grinding machine. D. R. Brown, Ansonia, Conn., assignor to Farrel Foundry and Machine Co.

780,983. Vehicle tire. C. W. Faithout, Summit, N. J.

781,262. Vehicle wheel [embracing a channeled rim for a rubber tire, the seat of the channel being corrugated]. Z. Xevers, Santa Cruz, Cal.

781,286. Method of making wheel tires. A. De Laski, Weehawken, N. J.

781,461. Wheel [with a specially designed rim adapted to pneumatic tires]. J. C. Raymond, New York city.

781,516. Respirator and inhaler. G. N. Guthrie, Jr., Cookville, Tenn.

81,587. Rubber disk for dental use. J. E. Blake, Amesbury, Mass.

Design.

37,313. Motor-car horn. F. Berton-Houel, Paris, France. *Claim*—The ornamental design for a motor-car horn.

Trade Marks.

44,096. Balloons. H. Kayser & Fils, New York city. *Essential feature*.—The words THE METEOR associated with the letters XX. Used since March, 1894.

44,112. Rubber lined hose. Bowers Rubber Co., San Francisco. *Essential feature*.—The representation of a red-colored woven textile covering for rubber lined hose having incorporated therein two broken parallel longitudinally extending black distinguishing lines, said lines being formed by the warps incorporated in the fabric and extending the entire length of the covering. Used since March 1, 1904.

44,113. Rubber lined hose. *Same*. *Essential feature*.—The representation of an orange-colored woven textile covering, with other features as stated above. Used since March 1, 1904.

[NOTE—Printed copies of specifications of United States patents may be obtained from THE INDIA RUBBER WORLD office at 10 cents each, postpaid.]



780,684.

GREAT BRITAIN AND IRELAND.

PATENT SPECIFICATIONS PUBLISHED.

The number given is that assigned to the Patent at the filing of the Application, which in the case of those listed below was in 1903.

* Denotes Patents for American Inventions.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 11, 1905.]

- 20,031 (1903). Bindages [for use in surgical treatment]. J. Otterbein, Eichstetten, Germany.
- 20,129 (1903). Waterproof aprons [for use by motorists for protecting the legs]. N. J. Paquin, Paris, France.
- 20,139 (1903). Vehicle wheel [involving plungers working in cylinders, by means of which and compressed air resiliency is obtained; provided with rim sections carrying rubber tires]. W. R. Fasey, Snarebrook, Essex.
- *20,142 (1903). Self-filling fountain pen. A. E. Schaaf, Toledo, Ohio.
- 20,316 (1903). Chest expander or exerciser. T. Barth and W. Kampschulte, Solingen, Germany.
- 20,319 (1903). Bath. [A portable douching apparatus.] H. Brandes, Hamburg, Germany.
- 20,338 (1903). Solid rubber tire [with means of retaining the same in the channel rim]. C. Challiner, Manchester.
- 20,350 (1903). Elastic tire [consisting of a hoop of coiled wire, with an outer cover of rubber]. C. Hammer, Manchester.
- 20,369 (1903). Air cushion or water cushion [with special means for inflation]. C. Glass, Oschersleben, Germany.
- *20,395 (1903). Pneumatic tire [comprising a special tubular fabric]. P. D. Thropp and A. de Laski, Trenton, New Jersey.
- 20,444 (1903). Elastic tire [made by rolling sheets of rubber into a cylindrical form, with or without a central air space]. R. Bell, Amisfield, near Dumfries.
- 20,464 (1903). Protective covering for pneumatic tires. W. Heatley, Willesden, Middlesex.
- 20,473 (1903). Heel protector. J. Thomas, Bath.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 18, 1905.]

- 20,708 (1903). Revoluble heel pads for boots. I. Frankenburg, Ltd., and R. J. Frankenburg, Salford, Manchester.
- 20,816 (1903). Pads for table legs. T. Anspach, Mannheim, Germany.
- 20,918 (1903). Dental trough [of soft rubber, for use in applying medicaments to the teeth or gums]. P. Edgelow, London.
- 20,983 (1903). Hand stamp. J. A. Jackson, Birmingham.

[ABSTRACTED IN THE OFFICIAL JOURNAL, JANUARY 25, 1905.]

- 21,190 (1903). Driving belt for motor cycles. [Consists of wire helix surrounding a core of rubber or other material; an outer covering of rubber may be added.] Y. A. Calderwood, London.
- 21,242 (1903). Revolving heel pad [in which ebonite or vulcanite is used instead of the usual metal plates]. G. W. Dawes, West Didsbury, near Manchester.
- 21,366 (1903). Pneumatic tire with puncture resisting cover. H. W. Cave-Browne-Cave, London.
- *21,402 (1903). Bedclothes holder. S. A. Coffman, Paris, Illinois.
- 21,499 (1903). Fishing bait. J. B. Jakobsen, Steigen, Norway.
- 21,500 (1903). Inhaler [for administering anesthetics]. J. Lorjols, London.
- 21,536 (1903). Boot heels [with wooden or metallic core, fitted with rubber covering]. F. W. M. de La Cose, Easebourne, Sussex.
- 21,546 (1903). Solid tire with special retaining means. C. Challiner, Manchester.

[ABSTRACTED IN THE OFFICIAL JOURNAL, FEBRUARY 1, 1905.]

- 21,600 (1903). Billiard table [having spot marks, pocket mouths, etc., formed of rubber to prevent the cloth from being injured owing to the ball being continually placed thereon]. S. A. Sisson, Huddersfield.
- 21,605 (1903). Solid rubber vehicle tire. T. Gare, New Brighton.
- 21,684 (1903). Gymnastic apparatus or exercise. T. Barth and W. Kampschulte, Solingen, Germany.
- 21,690 (1903). Pneumatic motor tire. H. W. Dover, St. James, Northampton.
- 21,722 (1903). Vehicle wheel [with rubber layer between the felloe and metal rim]. T. Gare, New Brighton.
- 21,785 (1903). Flexible tubing [formed by applying a waterproof coating to a closely wound helical coil of wire]. J. Dring, London.
- 21,816 (1903). Heel pad. F. W. Burn, Manchester.
- 21,867 (1903). Pneumatic tire [with puncture preventing band of

leather.] F. D. Wilton and R. W. Cox, Birmingham.

*21,890 (1903). Process for preparing rubber from various shrubs. W. A. Lawrence, Brooklyn, New York. [The process is the subject of several American patents granted to Mr. Lawrence and assigned to the Continental Rubber Co.]

- X 22,002 (1903). Driving belt [formed of canvas impregnated with India-rubber, Cutta-percha, or Balata.] W. A. Shaw, trading as R. Lloyd & Co., Birmingham.
- 22,019 (1903). Heel protector for boots. E. T. Spencer, London.
- 22,035 (1903). Waterproof cloak for motorists. T. H. Holding, London.
- 22,074 (1903). Life belt. G. W. Mitchell, Lunenburg, and J. A. Johnson, Halifax, Nova Scotia.

GERMAN EMPIRE.

PATENTS GRANTED.

- 158,486 (Class 77a). Golf ball composed of an elastic core wound with rubber threads under tension. R. Appleyard, Silvertown, England. Jan. 4.
- 158,298 (Cl. 63e). Pneumatic tire. Dr. T. J. Cooper and J. D. Smith, Paterson, New Jersey. Jan. 4.

DESIGN PATENTS GRANTED [GEBRAUCHSMUSTER].

- 240,250 (Class 39). Vulcanized fiber plate fastened with rubber to a textile material, to stiffen the collars of garments. J. and M. Miess, Coblenz. Jan. 4.
- 239,742 (Cl. 30a). Air cushion. F. Rosset, Freiburg i/Br. Jan. 4.
- 240,207 (Cl. 30d). Tight fitting seamless elastic body band. D. Grote, Nachf., Barmen. Jan. 4.
- 240,764 (Cl. 63e). Air tube for tires strengthened in cross section by a stiffening insert of woven material. E. Lange, Gotha. Jan. 11.
- 240,360 (Cl. 82d). Wringer roll, consisting of a number of rubber rings fixed upon an axis, having a provision for leading off the expressed fluid. C. Kampmann, Jr., Mühlheim a/ Ruhr. Jan. 11.
- 240,302 (Cl. 30d). Abdominal band, knit in one piece and made elastic by the working in of rubber bands. Frau Melitta Hohm, Hartenstein. Jan. 11.
- 240,358 (Cl. 63e). Device for avoiding danger from the bursting of automobile tires. A. von Hasperg, Baden-Baden. Jan. 11.
- 240,359 (Cl. 63e). Vehicle tire having felloe in two parts, containing depressions on its periphery for the purpose of tightly enclosing the protective tread. A. von Hasperg, Baden-Baden. Jan. 11.
- 240,730 (Cl. 63e). Inner tube for tires. Vereinigte Berlin-Frankfurter Gummiauera-Fabriken, Gelnhausen. Jan. 11.
- 240,732 (Cl. 63e). Inner tube for tires. Same. Jan. 11.

APPLICATIONS.

- 35,713 (Class 63e). Elastic tire. A. Boguslavski, London, England. Jan. 4.
- 36,969 (Cl. 63e). Elastic tire. R. Bell, Dumfries, Scotland. Jan. 4

THE FRENCH REPUBLIC.

PATENTS ISSUED (WITH DATES OF APPLICATION).

- 345,795 (Aug. 13, 1904). L. A. Mercier. Pneumatic tire.
- 345,870 (Aug. 26). J. Duval and H. Bedet. Pneumatic tire.
- 345,895 (Aug. 27). M. Cau and B. Delorme. Pneumatic tire.
- 345,926 (Aug. 29). H. Penther. Apparatus for separating vulcanized rubber from textile materials or metallic substances combined with it, or form coatings (glazing materials, paint, etc.) or such like substances.
- 345,952 (Aug. 31). C. J. Pegion. Motor tire.
- 346,025 (Sept. 3). E. Cadavea. Pneumatic tire.
- 346,178 (Sept. 12). C. Beau. Pneumatic tire protector.
- 346,180 (July 11). A. L. Cadé. Protective anti skidding metallic buttons for wheel tires.
- 346,231 (Sept. 15). P. N. Fawcett and E. D. W. Bellhouse. Pneumatic tire.
- 346,245 (April 27). A. L. Fayel. Means of repairing tire inner tubes.
- 346,369 (Sept. 20). H. Eiehsen. Process for the manufacture of a rubber substitute.
- 346,531 (Sept. 7). H. Kirstaetter. Pneumatic tire for bicycles and other vehicles.
- 346,648 (Aug. 25). O. Albrecht. Protective shield device for tires.
- 346,636 (Sept. 28). J. C. Dunois. Anti skidding tire protector.

[NOTE.—Printed copies of specifications of French patents may be obtained from R. Bobet, Ingénieur-Conseil, 16 avenue de Villiers, Paris, at 50 cents each, post paid.]

NEW ENGLAND RUBBER CLUB MIDWINTER DINNER.

A NOTABLE event in the history of the New England Rubber Club was the annual midwinter dinner, at Youngs' Hotel, Boston, on Friday evening, February 24. It is customary at these gatherings to get together early, *i.e.*, at 5.30 in the afternoon, and have an hour of social converse, after which comes the dinner and then the oratory, all being finished in time for the out of town members of the Club to catch their trains without undue effort. Such a program was observed at the recent dinner.

In the hotel reception parlor the officers of the Club acted as a reception committee, and at 6.30 o'clock, headed by the Hon. L. D. Apsley, president of the Club, and the distinguished guests, the diners proceeded into the large banquet hall, where covers had been laid for 170 persons. In the middle of the speaker's table was a handsome floral centerpiece, while at the plate of each guest was a neat *boutonniere*. The gentlemen at the speaker's table were Messrs. L. D. Apsley, president of the Club; John D. Long, late United States secretary of the navy; Samuel P. Colt, president of the United States Rubber Co.; the Rev. John Baltzly, William R. Dupee, Robert D. Evans, George H. Hood, Joseph Davol, A. H. Alden, Arthur W. Stedman, Erskine M. Phelps, John H. Flint, Frank Poel, Henry C. Morse, Ex-Governor A. O. Bourn, George P. Whitmore, and Henry C. Pearson.

At right angles to this table were four long tables at which the Club members and their guests disposed themselves in accordance with a somewhat elastic but well arranged seating schedule. The menu, which was Young's choicest, is reproduced on this page. The music was furnished by Partridge's orchestra, of Boston, and was most excellent.

A list of those present reveals the fact that not only was the whole of the New England rubber trade out in force, but New York, Chicago, and other centers were well represented. Members of the executive and manufacturing staff of the United States Rubber Co. were also present in force, and showed by their attention and applause that their president was not only respected but most popular.

PRESIDENT APSLEY'S ADDRESS.

GENTLEMEN: To our distinguished guests, members of the Club, and friends, I extend a most cordial welcome.

During the year just ending our Club has suffered the loss of five of its members by death, among whom were Hon. Elisha S. Converse, honorary president of the Club, and Mr. George A. Alden, one of our honorary vice presidents, both of whom, by their conspicuous business ability and integrity, made their way to the very front rank in their respective

lines of business, and at the same time won the highest regard of the members of this Club by the excellence of their personal characters.

The New England Rubber Club was never in as prosperous a condition as it now is, its membership being the largest in its history. Our banquets, smoke talks, and midsummer outings have all been largely attended and most thoroughly enjoyed, and I trust that these most agreeable gatherings will always be as successful and will afford equal pleasure, but I must repeat once more that I feel that trade organizations in general, and this Club in particular, should justify themselves by something besides having these good times.

I recall our first banquet after organizing, given some years ago at the Trade Club. When asked to say a word as to the desirability of clubs, I made the claim then that their existence could be amply justified, and went further and said that they were as essential and as helpful to men in business as the schoolhouse was to us when we were boys. I made this declaration believing that by coming in close contact with each other, the narrow business men rubbing up against the stronger ones, all are broadened and greatly benefited.

The great business brains and wealth of the country are found in these clubs, and if these organizations could be made to think less of the social features and be made to realize what a power they possess, what a mighty influence they could exert, my claim would not be too broad.

I would like to see every reformer, educator, and especially the clergymen, made members of these clubs by special invitation, without paying the initiation fees or annual dues, as they would be helped in their work by meeting and getting the views of these practical business men.

It is not the plodder in business who does not belong to clubs and confines himself closely to the four walls of his counting room, that makes the greatest success for himself or does the things that make such mighty progress and advancement in civilization. It is the Morgans, John Wanamakers, and Marshall Fields who, through the environment of churches and clubs, meet and confer with their fellow men, who help themselves, and confer mighty benefits upon those who come in contact with them.

So much for clubs in general. Now a word about trade clubs. There are some forty of these organizations in the state of Massachusetts with memberships varying from 100 upwards. I refer to trade clubs only, or business men's organizations.

What an influence they might exert on state or national questions where the judgment of sound, practical, experienced business men is needed—judgments free from the influence of political organizations or of any organization composed of theorists—the judgment of men who



HON. L. D. APSLEY,
PRESIDENT OF THE CLUB.

MENU		
Cotuit Oysters		
Chicken Okra	Consommé Jardinière	
Celery	Radishes	
Boiled Halibut, Egg Sauce		
Potatoes Hollandaise		
Sirloin of Beef Larded, with Mushrooms		
Roast Duck		
Vol au Vent à la Reine Margot		
Oysters, Poulette		
	Pears, Richelieu	
Bombe Glacé	Chocolate Bavarian Cream	
Ice Cream	Sherbert	
Fruit	Cheese	Olives
	Coffee	

would approach all questions with a business man's training. Necessarily they would consult counsel, but they would with sound judgment retain as counsel men of the greatest ability and of the very highest integrity. In looking for such men, they would no doubt at once confer with our two distinguished guests on my right and left, who so fully meet these requirements.

What a benefit they could confer upon the business interests of the country at the present time in helping the majority or minority to wisely shape the legislation regarding the national bankrupt law which is now under fire and affects business men only; the regulation of freight rates; reciprocity and many other important questions, which are purely business propositions and should be dealt with as such. All party, political and selfish interests would be eliminated and their influence would be greatly weakened if these trade clubs, made up as they are of business men, would take such subjects in hand.

Realizing the desirability of what I have said, I would like to see these trade clubs take up this all important work, and as our annual meeting occurs in April, it may not be amiss for me at this time to suggest some work that this Club might do another year.

Let the New England Rubber Club appoint a committee of five of its ablest men and invite each of the other forty trade organizations to do the same, and as they would no doubt each one select five of their ablest men a committee of two hundred of the very strongest business men in the state would come together in one organization and take up and fully discuss many important questions, after which they could report back to their various clubs, when the membership of the forty clubs could take action which would make their influence felt.

In no other way would it be possible to select a committee of two hundred as strong business men, as each body would wish to be ably represented and their best men would undoubtedly serve, as they would feel honored at being selected from among their associates to represent their club. Their influence would be immeasurable, and it would offset largely that of the impracticable newspaper writer who too often is only a theorist, but writes well and therefore shapes many times the opinions of men who have not time to thoroughly consider very many important questions.

Gentlemen: We have had many red letter days in the history of our Club when it has met in the banquet hall. It has been honored by the presence, and has listened to words of wit and wisdom from men who, by their exceptional ability and attainments, have made their mark in the state and in the nation.

In fact, we have become so accustomed to having the very best at our banquets, not only on our tables but in the feast of reason which so naturally follows the feast of eatables, that it is becoming more and more difficult to satisfy our natural desire that the last shall be the best.

As this is to be the last banquet over which it will be my duty to preside, I confess to having had the ambition to bring together at this time such elements as would make this the most profitable and most enjoyable occasion in the history of the Club, and I am especially fortunate to-night in being able to present to you as the first speaker, one whose introduction to you would be superfluous, in fact, one who needs no introduction to any citizen of the state he honored by being its governor, or of the nation which at a critical time, when its world policy was taking on new and larger proportions, had as the director of its naval affairs, our distinguished guest at my right.

Gentlemen of the Club, I do not know your feelings in regard to monopolies and monopolists in business lines, but I do know your feelings toward our honored guest, who is one of the greatest monopolists of the age, for, as a result of his long, useful and brilliant career in the state and nation, in his life as a citizen and statesman, he has monopolized the love, not less than the respect of all who knew him. I present to you the Hon. John D. Long.

MR. LONG'S ADDRESS.

THE name of Ex-Governor Long was the signal for a most enthusiastic welcome, the audience rising and cheering until the great hall echoed with welcome. In his own inimitable way he made fun for ten minutes before settling down to his theme. He agreed that he knew little of India-rubber, but opined that had Leander possessed rubber boots he would have waded the Hellespont instead of swimming. Noting that one half of the Pilgrims died during their first year in the New World, he said, they might have been saved by Apsley rubbers. Pausing a moment he explained that he advertised that maker of goods because the toastmaster had so well advertised him that his office hours were from 10 to 5 and that Apsley got a commission on all business that came in as a result of that dinner. To say that these bits of local fun were appreciated is stating a fact with far too much mildness. He then paid his respects to the company as "Captains of Industry," and said:

I am not at all sure that the time is not rapidly approaching when we shall be obliged to reform our public schools. It seems to me as if we were training our children out of the old industrial habit. Isn't it true that the time has come when it is desirable to create in our schools a great respect for industrial education? The academic life is not enough to meet the interests of the coming time. The minute you have established your technical school you will have solved the social problem itself, helped to break down the class distinction of which we hear so much.

He made a masterly plea for universal peace for which most great industries stand, and referring specifically to the rubber trade said it typified health, cultivation in the arts, and further development toward the sweet beneficence of peace.

Most graphically he pictured the struggles and triumphs of Charles Goodyear and said, amid a burst of applause, that a statue to the great inventor would mean more to civilization than one to the greatest of military heroes. "Were the angel of Ben Adhem's dream now to appear, the name of Goodyear would lead all the rest."

He spoke tenderly and reverently of his life long friend, the late E. S. Converse, as of the American great in industrial affairs, and yet an ideal type of one who lived the simple life. He declared himself against the attitude of President Roosevelt in regard to the Monroe Doctrine and the navy. He said that in his opinion it is not desirable that this country should become a collector of debts for Europe against the South American republics. He asserted that, while he believed in a large navy, he was opposed to a large immediate increase, on the ground that it would tend to create a reaction on the part of the people, and that it would be impossible to secure men to man properly such a navy as is now in prospect under the plans of the administration.



HON. JOHN D. LONG.
FORMER GOVERNOR OF MASSACHUSETTS; LATE
UNITED STATES SECRETARY OF THE NAVY.
(Copyright, 1897, by E. Chickering.)

The benefits from war are of very doubtful value. They are not the steady flowing stream upon which you can rely. They are rather like a torrent that destroys as much as it carries. You are engaged in the beneficence of peace. I think we may all rejoice that our country now is in a condition of peace, that all the tendencies of our national life are in that direction. It is my earnest hope that we shall so continue, and that is one of the reasons why I think we are carrying this Monroe Doctrine a little too far. There is great danger that it may be carried to the point where it will result in unpleasant complications. I do not think it is desirable for us to become the collector of debts for all the nations of Europe which may hold claims against the South American republics. It may be of no consequence so far as San Domingo is concerned, but it is very questionable in my mind whether we ought to assume a position which is liable to lead, not to peace, but to dangerous complications with other nations.

I am one of those who do not just at this time look favorably upon a rapid increase of our navy. I believe we should have a large navy. I saw the need of that when I was secretary of the navy. I believe we need a large navy more than we need a large army. We need it as a national defence. But it is not desirable that we have it so large that by that very fact we shall seek complications with foreign Powers which we would not seek if we did not have a large navy. We have at the present time a very good navy. We have something like 14 very good battleships and cruisers. There are also under construction 24 battleships and armored cruisers, which will be built in the next few years. We shall then have 38 battleships and cruisers, and we have not to-day men and officers enough to man these ships.

For my part, I should be content with building one new battleship or none this year. I fear the large increase in our navy which is planned will produce a reaction on the part of our people against a large navy. And another reason why I object to it is that I fear we shall be unable to obtain men and officers enough properly to man such a navy.

THE REV. MR. BALZLY'S ADDRESS.

THE Chairman next said:

I regret exceedingly that, in place of introducing my friend Congressman Samuel W. McCall as the next speaker, I am obliged to read the following letter, which explains his absence.
[The letter was read.]

As we are deprived of having my political friend, I am pleased to be able to present to you my spiritual friend and adviser, to whom it has been both a pleasure and profit for me to listen for many years, and from what I know of the members of this Club, I am sure that you are all in need of a similar influence as much as I do. I have only been able to give him a very short notice, but the clergy are supposed to be emergency men, so I felt at liberty to call on him to fill the vacancy. I take great pleasure in presenting to you, the Rev. John Baltzly.

The Rev. Mr. Baltzly, of Hudson, Massachusetts, a young scholarly man burning with enthusiasm, had prepared a paper on "The Industrial Evolution and Some of the Sufferings of this Present Time." He began by skilfully contrasting the ancient and the modern world, sketching the standard of living in each, ending with a brilliant word picture of our present complex social organism. He showed graphically the position of the working man, his rights, his opportunities, and his natural tendency toward "Union." He went to the root of the

matter in his brief synopsis of strikes and of labor legislation. Then turning to the tendency of modern business toward consolidation, he described the modern organizing specialist, his work and his worth, nor did he hesitate to affirm that he believed combinations were natural and the "coming form of industrial organization." The paper as a whole was one of the most finished essays that the subject has yet called forth.

The Chairman said:

Our next and last speaker is one of our members who is known to you all and needs no introduction by me. Some of us possibly have reason to appreciate much more than others his keen business ability, but all recognize that he has it in a marked degree. He is to-day the head of the largest organization engaged in the rubber business in the United States, if not in the world, and we are, therefore, especially fortunate in getting him to speak to us as a business man, and if he will only let himself out and tell us a little of what he knows about the rubber business, some of us may gain some points that will help us in our efforts to compete with him. Welcome indeed is he to the fruits of his labors, and gladly do we welcome him here to-night, recognizing his power and splendid ability.

I present to you Colonel Samuel P. Colt.

Colonel Colt, whom all knew, but not as an after dinner speaker, was received most enthusiastically. He at once got the attention of the audience, speaking in a clear well modulated voice, gracefully complimenting Mr. Long, and the absent Mr. McCall, and during his speech paying a tribute to his competitors, Messrs. Apsley and Hood. His speech follows but unfortunately does not carry the witty asides, of which the speaker gave many, or the bursts of applause that often emphasized his points:

COLONEL COLT'S ADDRESS.

MR. PRESIDENT, INVITED GUESTS, AND GENTLEMEN OF THE NEW ENGLAND RUBBER CLUB: When your genial president, Mr. Apsley, invited me to be present at your banquet this evening, and to address the Club on any subject I might select, stating in his letter that Governor Long and Congressman McCall had both accepted a like invitation, I began to

think whether there was any subject that I might possibly know more about than the two eminent speakers who were to address you, and the only one I could think of was that of "Crude Rubber," and that is my excuse for selecting so dry a topic. Dryness, while not desirable in an after dinner speech, is, as all rubber manufacturers know, an excellent quality in Crude Rubber.

Before proceeding to a more formal discussion of the subject, it might be interesting to mention a few historical incidents connected with the history of the rubber industry.

The natives of South America made certain primitive uses of "Caoutchouc" (rubber) even before the days of Columbus. Rubber "bottles" were sent from Brazil to Boston in the year 1800—perhaps prophetic of the future hospitality of the Hub. But until the discovery of vulcanization by Charles Goodyear, about the year 1840, the uses of the gum were comparatively few. The name "Rubber" was first given to the substance in England, from its use as an eraser.

The story of Goodyear's experiments with the gum while in a debtor's jail in Philadelphia, and later over his cook stove, which, becoming overheated while he slept vulcanized the strips of rubber which he had suspended, may or may not be literally true, but they



HON. SAMUEL P. COLT,
PRESIDENT UNITED STATES RUBBER CO.

are almost as familiar as Washington and his hatchet. Resulting from Goodyear's experiments, however, grew the mighty industry in which rubber importers and manufacturers are now engaged.

As an illustration of the growth of the industry let me refer to the career of a highly honored citizen of Massachusetts, the late Elisha S. Converse. Deacon Converse, as licensee under the Goodyear patents, started in 1853 the Boston Rubber Shoe Co. in a small wooden factory, with a capacity of a few hundred pairs of boots and shoes per day, and then looked forward, as he afterwards told me, to the time when he could reach a product of a thousand pairs per day; and yet he lived to see his great factories at Malden and Melrose manufacture 55,000 pairs of rubber boots and shoes per day. What better illustration can be given than this of the growth of the rubber industry in the past 50 years?

The future supply of "Caoutchouc," or "Crude Rubber," which is popularly supposed to enter somewhat into the products we manufacture or deal in, presents a most interesting and vital problem.

Representing, as you do, the rubber interests of New England in all its varied lines, it is not inappropriate at this time to call your attention to this subject, since, in my opinion the future prosperity of the rubber business, if not its very existence, hinges upon the satisfactory solution of the problem of obtaining in the future sufficient quantities of crude rubber for the world's requirements.

The consumption of rubber has extended to many new fields. In the electrical and other industrial arts, its use on an extensive scale has become indispensable. But more important than these material interests, the comfort and health of the great mass of our people are dependent upon the requisite supply of rubber products.

It follows that the failure of the rubber supply at the present time would fall little short of a national calamity, and that even a further substantial advance in price, owing to scarcity of production, is fraught with many evil results, not only to our business interests, but also to the well being of the millions of consumers of our goods.

This simple statement is enough to show that the present situation calls for our united and earnest efforts, to prevent, if possible, any falling off in the supply of this most important and necessary article.

From the figures just announced by the Department of Commerce and Labor, we find that in the past 20 years, or from 1884 to 1904, the imports of crude rubber into this country have increased from 24,000,000 pounds to 62,000,000 pounds per annum, and the annual value from \$10,000,000 to \$44,000,000.

The largest portion of this India-rubber comes from Brazil. That country furnished us last year 34,500,000 pounds, or more than half the entire imports, while Africa supplied most of the remainder. Comparatively small quantities were shipped from the Central American states and Mexico.

These rapidly increasing imports, together with the great advance in price, demonstrate that the present demand for crude rubber is greater than the normal supply. With our growing population, and the manifold and ever extending uses of this gum, there is no reason why the past ratio of increased demand should not continue for the next 20 years.

The question now arises, How are we to meet this situation? Can it be done by husbanding the supply through a more economical use? This is not practicable unless we reduce the quality of our product, an alternative which it would be most disastrous to adopt. Can we find some substitute? The outlook in this direction is not encouraging.

The range of substitutes is very narrow. In the few instances in which a substance resembling rubber has been discovered, the article has been so inferior, the cost of production has been so high, or the quantity produced so small, as to afford little prospect of relief from this source. The cultivation of the rubber tree, which has been undertaken in Mexico, Central America, Ceylon, and

other countries, although so far not a factor, may in time yield results.

It is evident that neither immediate nor permanent relief lies in these directions. Such relief must be looked for in increased production of rubber in those vast regions which are watered by the Amazon and the Congo. The growth of rubber trees extending inland from the banks of these rivers and their tributaries is simply inexhaustible. The material is all there in sufficient quantities to supply our wants for a hundred years. It only awaits the hand of man to gather it. It does not lie hidden in the bowels of the earth. It is visible to the eye, and covers regions thousands of miles in extent.

When we read of the present crude mode of obtaining the milk from the tree, and the slow and primitive way of curing it, it would seem as if a little Yankee ingenuity could readily increase the production sufficient to meet our requirements. The recent trip of Commodore Benedict up the Amazon only confirms the reports of other travelers that the rubber is now gathered in a most crude and unsystematic manner.

Statistics show that during the past twenty years even under existing conditions the production of rubber has largely increased, although during the past three years the product of Pará grades has remained substantially stationary.

While the Pará, or Hevea rubber, constitutes the permanent and reliable sources of supply, the augmented demand of recent years has been met by two other kinds of gum, known as the "Caucho" of the Amazon, and the products of the Congo, or African rubber. These latter gums are obtained by cutting down and destroying the trees and vines. This system of gathering rubber can only end in the final exhaustion of the supply. Caucho is found only in the interior, and on lands which are not inundated, and it is gathered almost exclusively by Indian labor. Although showing considerable increase of late years, these sources of supply are quite uncertain, and, apparently, not lasting.

It is to the Pará of the mighty Amazon valley that we must look for the permanent solution of the crude rubber problem. That valley is capable of yielding quantities of the best gum in the world for the next fifty years, equal to two or three times the present demand, if the labor can be had, and improved methods devised, to obtain it.

"Pará" is the only species of rubber that can be economically and successfully gathered by tapping the trees without injuring their vitality and productiveness. For the past 50 years this rubber has been taken by this process from the same trees on the banks and inlands of the Amazon.

As an occupation for industrious natives and acclimated foreigners, it has been truly said that this field offers a higher remuneration for unskilled labor than any other industry in the world. This rubber tree always grows in groups. The labor involved in tapping 150 to 200 trees a day is less than the work of cutting down and extracting the milk from a single tree. Again, these trees grow near the banks of navigable streams, thereby affording economical and convenient facilities for transportation. Further, they can be tapped almost daily and continuously from year to year.

It would seem as though we must look to Pará rubber as the ultimate source of the world's supply. Within a period of twenty years it has grown from an output of 8000 tons to 30,000 tons. Pará rubber is adapted to sustain almost any demand, if the vast forests in which these trees abound are opened up, taken care of, and properly worked.

By systematic development and effort the production of Pará rubber can be established upon a permanent basis, which will give it a position among raw materials practically as reliable as cotton or corn.

The prodigality of nature has stored away under the burning sun of the equator an abundant supply of crude rubber. The inaccessibility of the country, the intense heat, the quality of labor, the questions of supplies and transportation, are the obstacles

which must be encountered and overcome in order to solve the rubber problem. But these obstacles are not insurmountable. England has met and overcome similar obstacles in India and in South Africa. The Anglo-Saxon race has never permitted natural barriers to stand in the way of its commercial and industrial advancement.

There is no danger of an immediate cessation of the supply of crude rubber. We are looking simply to the not distant future, with a full realization of the possible peril that exists. We all realize that it will take time, energy, and capital to accomplish satisfactory results. Crude rubber has now become almost as valuable as some of the precious metals. As no obstructions of nature have ever long impeded the development of gold or silver or copper mines, so we believe that American courage, and energy and perseverance will solve the rubber problem before the danger point is reached.

Our whole history from the landing of the Pilgrims on the Atlantic coast until we entered the Golden Gate of the Pacific has been one long struggle with nature's barriers. But nothing could stem our progress or dampen the ardor of the American spirit. The same fearless energy and undaunted heroism which has subdued a continent and made it the home of civilization and freedom can conquer and utilize for the comfort and health of mankind the vast forests of the Amazon.

It is this American spirit which has made us what we are to-day. It is this spirit which has hitherto defied the trackless wilderness, the swamp, the desert, the mountain and the prairie. It is this spirit which has built our magnificent cities, spanned the territory between the oceans with railways, made the flinty rock yield up its hidden treasures, and covered the land with rich harvests of grain and fruit.

It is this spirit which animated the early pioneers in their long, dreary march over thousands of miles of desert and mountain to the gold fields of California. It is this spirit which has surmounted the impenetrable fastnesses of the Klondike, locked in perpetual snow, to obtain the most precious of metals.

It is this spirit which will build the Panama canal under the same climatic and other adverse conditions that prevail on the Amazon. It is this spirit which filled the intrepid soul of Goodyear, who, during the ten years of hardship, suffering and want, in jail and out, using even the few tea cups he had for experimental purposes, continuing his struggle until his dream of vulcanization had become a reality.

It is this spirit which has conceived and organized our vast industries upon plans so comprehensive, and of such magnitude, as to arouse the amazement of other nations. It is this spirit which is pouring into our lap the largest share of the commerce of the civilized world.

It is by the exercise of this spirit that the difficulties which now confront us respecting the supply of crude rubber will vanish, and its production be placed upon foundations of such security and permanency as will not only meet the increased demand, but will also ensure to the rubber industry that measure of prosperity commensurate with the benefits and blessings it confers upon mankind. It is this spirit that inspired the lines of the poet:

"Rift the hills, and roll the waters,
Flash the lightnings, weigh the sun—"

MR. PHELPS INTRODUCED.

THE Chairman said :

Among the invited guests this evening, I am pleased to see that we have with us a gentleman from Chicago who has accomplished what we are all striving for, and that is, the accumulation of a satisfactory quantity of the almighty dollar, and has retired from active business. He was a large and successful jobber of leather and rubber boots and shoes, and, therefore, undoubtedly retains some interest in the object for which our Club is organized. His reputation as a business man has preceded him, and I feel safe in

assuming that, as a citizen of Chicago he can bring us a message from the West which will be welcome. On a similar occasion while in his city he called upon me for a speech in the most unexpected and heartless way, and so I have no hesitancy in availing myself of the first opportunity for retaliation.

I call upon Mr. Erskine M. Phelps, of Chicago.

Mr. Phelps, coming as he said from the city by the "inland sea," spoke a word of graceful eulogy of his long time friend the late Hon. Elisha S. Converse, another to the Club, and sat down. Ex-Secretary Long, turning to him and mentioning the extreme brevity of the speech, said: "It's the best one tonight."

INDIA-RUBBER GOODS IN COMMERCE.

EXPORTS FROM THE UNITED STATES.

OFFICIAL statement of values of exports of manufactures of India-rubber and Gutta-percha, for December, 1904, and for the twelve months of five calendar years :

MONTHS.	BELTING, PACKING, AND HOSE.	BOOTS AND SHOES.	ALL OTHER RUBBER.	TOTAL.
December, 1904....	\$ 81,305	\$127,742	\$ 191,766	\$ 400,813
January-November...	808,771	1,099,030	2,149,273	4,057,074
Total, 1904....	\$890,076	\$1,226,772	\$2,341,039	\$4,457,887
Total, 1903....	857,634	991,351	2,511,980	4,360,965
Total, 1902....	738,257	1,065,592	2,011,905	3,815,754
Total, 1901....	608,116	974,018	1,743,882	3,326,616
Total, 1900....	528,382	721,085	1,559,049	2,808,516

COMPARISON OF RETURNS FOR THE PAST TWO YEARS.

GAIN in Belting, packing, and hose.....	\$ 32,442	
GAIN in Boots and Shoes.....	235,421	\$277,863
Loss in all other.....		170,941
Net gain for 1904		\$ 96,922

NUMBER OF PAIRS OF RUBBER BOOTS AND SHOES EXPORTED:

In 1899....	621,069	In 1902....	2,377,743
In 1900....	1,399,285	In 1903....	2,170,172
In 1901....	2,408,776	In 1904....	2,391,806

SHIPMENTS TO NON CONTIGUOUS TERRITORIES.

DESTINATION.	BELTING, PACKING, AND HOSE.	BOOTS AND SHOES.	ALL OTHER RUBBER.	TOTALS.
<i>Alaska :</i>				
1903....	\$32,351	\$ 88,331	\$17,248	\$137,930
1904....	44,363	130,552	19,337	194,254
<i>Hawaii :</i>				
1903....	\$37,329	\$ 7,386	\$30,169	\$74,877
1904....	29,439	12,036	34,089	75,564
<i>Porto Rico :</i>				
1903....	\$8,545	\$811	\$16,074	\$25,430
1904....	8,776	269	16,814	25,859
<i>Philippines :</i>				
1903....	\$23,044	\$ 2,576	\$35,261	\$60,881
1904....	31,653	7,684	42,809	82,146
<i>Totals :</i>				
1903....	\$101,262	\$ 99,104	\$ 98,752	\$299,118
1904....	114,231	150,541	113,049	377,821

IMPORTS INTO THE UNITED STATES.

	1903.	1903.	1904.
India-rubber goods....	\$562,997	\$682,982	\$1,003,167
Gutta-percha goods.....	121,123	442,580	123,330
Total.....	\$684,120	\$1,125,562	\$1,126,497
Re-exports.....	4,655	8,624	10,077
Net Imports.....	\$679,465	\$1,116,938	\$1,115,220

CANADA.—The rate of import duty on automobiles has been increased from 25 to 35 per cent. *ad valorem*. The same rate applies to automobile tires.

THE DEATH OF A. H. YEOMANS.

ALMERON HART YEOMANS died suddenly of heart failure at 4 o'clock, on the morning of February 22, near Richmond, Virginia, while on a train, returning from a visit which he had made to the South, in the company of his wife, in what proved a vain effort to benefit his health. Funeral services were held at No. 39 Abbottsford road, Brookline, Massachusetts,

which for years had been their home, on Sunday afternoon, February 26. The services were conducted by the Rev. Mr. Ryder, pastor of the Universalist Church in Malden, with which Mr. Yeomans had formerly been associated. According to his written request, found after his death, his body was cremated at the Forest Hill Cemetery, and his ashes sent back to his old home in Ohio.

ALMERON HART YEOMANS.

The subject of this sketch, and of the accompanying portrait, had entered upon his seventieth year on February 5, though nothing in his appearance or in his attention to affairs would have suggested that he had finished the scriptural allotment of "threescore years and ten." He was a native of the village of Kinsman, in northeastern Ohio, whence he removed, in his sixteenth year, to New York city, with a view to beginning a business career with an uncle. Before very long, however, he went to Michigan, where he taught school for a short time. Later he went to New England, making his home with relatives at Portland, Maine, and holding a position for several years as purser on a steamer plying between Boston and St. John (New Brunswick). During the civil war he was on one of the government transport boats. He next became connected with the Haywardville Rubber Co., located near Malden, Massachusetts, and occupying the "Red Mills," which had figured at an earlier date in the life history of the Hon. Elisha S. Converse. Here he acted in the general capacity, having supervision of all departments of the business, until 1872, when the company ceased to exist.

A story that is typical of Mr. Yeomans's manner of putting things in an original and humorous way is told by one who was intimate with him at that time. When the "Red Mills" property was finally sold under the hammer, Mr. Yeomans was the auctioneer, and he did his work well. After the last parcel had been sold, he paused, and with a twinkle in his eye said:

"That is all, gentlemen, with one exception—my services. I am now free and my services are here put up at auction." Then in an aside: "If some rubber man present does not employ me I shall have to start a rubber factory of my own." Mr. Converse who was present, said quietly: "Come and see me to-morrow." The appointment was kept, and resulted not only in a close business alliance but in a firm friendship which lasted so long as both of the men were alive. The value of Mr. Yeomans's

services was apparent from the first, but certain it is that, after a memorable fire at the Malden factory of the Boston Rubber Shoe Co., the prompt and judicious assistance given by Mr. Yeomans in the way of finding building materials for a new structure commended him to Mr. Converse even more favorably than before. And this reference recalls the fact that on the occasion of a later great fire in Boston, Mr. Yeomans was again of eminent service, when he perceived the danger in time and assisted Mr. Converse to remove the company's books from the doomed office to a place of safety.

Mr. Yeomans acted at first as purchasing agent for all of the supplies used by the Boston Rubber Shoe Co., except crude rubber, which was bought by Mr. Converse himself, but after a few years this department was placed in his hands also. After their incorporation with the United States Rubber Co. Mr. Yeomans assumed a like position with the larger company, where the purchases, which had previously been made by the executive committee, ran into millions of money every year. In 1904 he became general manager of the General Rubber Co. (New York), which is practically the buying agency of the United States company.

For many years Mr. Yeomans was a neighbor of Mr. Converse in Malden, where he served as an alderman under the first city government, Mr. Converse being mayor. Later he resided in Brookline, Massachusetts, where he had a beautiful home, of which he was very fond, and which he retained after his transfer to New York compelled him to maintain a residence in that city. His ability was unquestioned; his integrity was unswerving; and his character and disposition in general such as to win for him the personal esteem of all who were brought within the sphere of his acquaintance.

PITT BARROWS.

PITT BARROWS died at his home at Spring Hill, in the town of Mansfield, Tolland county, Connecticut, on January 17. Mr. Barrows was born in Mansfield, May 24, 1843; at the age of 20 years he became employed as a buyer of provisions for the Union army with headquarters at Baltimore, Maryland; after the civil war he was interested for several years in the manufacture of turpentine at Newbern, North Carolina; he was later associated with General B. F. Butler and General Sanborn in the settlement of United States tax cases, as an expert accountant, in which connection his work is said to have saved the government several millions of dollars. During the last 14 years of his life Mr. Barrows was selling agent of The Bloomfield Soft Rubber Works (Paterson, New Jersey), in which, as in all his other business relations, he proved most efficient and endeared himself to all with whom he came in contact. Mr. Barrows was at one time a resident of New York city, but about 25 years ago he returned to Mansfield and thereafter lived in the house built by his father. Mr. Barrows was a Democrat in politics, and his popularity in his native town was proved by his being the first Democratic town clerk ever elected there. He at various times filled other town offices. While not an enlisted man in the army during the civil war, Mr. Barrows was called "Captain" by his intimates, and always retained the friendships formed during the war.

The funeral was held on January 20, in the Congregational church at Willimantic, Connecticut, the services being conducted by the Rev. Thomas Edward Potterton, of the Church of Our Father, Brooklyn, assisted by the Rev. Ashley D. Leavitt, pastor of the Willimantic church. The remains were placed in the receiving vault in the Willimantic cemetery, to be interred later in New York. Mr. Barrows was married about 29 years ago to Miss Bessie Garland Van Duzer, of New York city, who survives him.



NEWS OF THE AMERICAN RUBBER TRADE.

SEAMLESS RUBBER CO.—INCREASE OF CAPITAL.

THE Seamless Rubber Co. (New Haven) on February 2 filed with the secretary of state of Connecticut a certificate of increase of capital stock from \$250,000 to \$300,000. General Manager E. E. Menger advises THE INDIA RUBBER WORLD: "This was done in order to provide funds for an increase in our machinery and equipment. All of the above stock was subscribed for by the present holders. We take pleasure in advising you that, owing to our constantly increasing business, we were compelled, in order to keep up with the demands of our customers, to provide for the additional equipment." The last previous increase in capital stock was made in June, 1903, when it was raised to \$250,000.

THE EUREKA FIRE HOSE CO. IN THE SOUTH.

MR. WARWICK H. PAYNE, who for several years has been manager of the southern department of The Eureka Fire Hose Co. (New York), with headquarters at 704 Century building, Atlanta, Georgia, has been placed in exclusive charge of their sales in North Carolina, South Carolina, and Virginia. Mr. Payne will be assisted by Mr. H. H. Alvis, who will be located at some convenient point in Virginia and give his sole attention to that state, and by Mr. Charles B. Payne, with headquarters in Atlanta, and giving attention to the southern part of the territory. The Eureka Fire Hose Co. ask that their friends in the south communicate direct with the Atlanta headquarters, and suggest that information as to contemplated purchases be wired at their expense.

COLONIAL TIRE AND RUBBER CO.

THE annual meeting of shareholders of the Colonial Tire and Rubber Co. was held at Akron, Ohio, on January 30. The directors were reelected: John Byrider, James A. Swinehart, P. D. Hall, and William A. Byrider—all of Akron—and John Hopper, of Wilmington, Delaware. The officers were then reelected:

President—JOHN BYRIDER.

Vice President—JAMES A. SWINEHART.

Secretary and Treasurer—P. D. HALL.

This is a Delaware corporation, dating from 1902, formed to control the European rights under the patents granted in 1901 to Swinehart and W. A. Byrider for the solid rubber tire marketed in the United States as the "Firestone" tire. This tire is made under license in several European countries, being known on the Continent as the "Byrider and Swinehart" tire.

ASSIGNMENT OF THE DAYTON RUBBER CO.

A DEED of assignment was filed in the probate court at Dayton, Ohio, on the afternoon of January 28, by Oscar F. Davieson, as president and attorney for the Dayton Rubber Co., conveying all the property of the company to Nathaniel P. Ramsey and Claude C. Hooven. Mr. Davieson stated that the liabilities of the company were about \$20,000 and the assets upward of \$50,000. The company was incorporated in Ohio, December 9, 1903, with \$250,000 capital authorized, to manufacture mechanical rubber goods, and the work of installing a plant was at once begun. A report has been current for some time that the organizers of the company had failed to secure the expected capital, which report is confirmed by the fact that suits were filed recently against Harrie N. Reynolds, Frank M. Andrews, and Eugene J. Barney, for sums aggregating \$15,400, and alleged to be due on account of unpaid subscriptions to the cap-

ital stock of the company. The assignees named were among the incorporators of the company, and Mr. Ramsey has since been vice president and Mr. Hooven secretary.

NEW WAREHOUSE OF THE UNITED STATES RUBBER CO.

THE United States Rubber Co. and the Boston Rubber Shoe Co. have moved their New York city warehouse from No. 9 Murray street, where they have been located for the last seven years, to a brand new building at No. 60 Thomas street, which these companies will occupy exclusively. The building consists of a basement and six floors, and has a floor area of about 14,000 square feet. This warehouse, like that in Murray street, will be under the charge of Mr. E. L. Phipps, selling agent of the Boston Rubber Shoe Co., assisted by Mr. J. C. Rockwell. Their office is on the ground floor, with the shipping department in the rear. The second, third, and fourth floors will be devoted to "Boston" and "Bay State" goods, and the fourth, fifth, and sixth floors to "Woonsocket," "Rhode Island," and other brands. Mr. Phipps has vastly better facilities than he had in Murray street, for by using the entire building, he has exclusive control of the elevator service. He expects to be able to take in or ship 1000 cases a day.

STANDARD UNDERGROUND CABLE CO. (PITTSBURGH).

THE annual report presented at the shareholders' meeting, on January 24, showed gross business for 1904 of \$8,571,553. The gross business for the preceding year was \$9,192,618. The report points out that more or less depression existed in business generally, resulting in keener competition and lower prices, but that there was practically no diminution in the volume of business transacted by the company. The unfilled orders on hand on December 31 aggregated over \$1,000,000. The company have no outstanding notes, mortgages, bonds, or preferred stock, and no contingent liability on customers' notes. Out of the net earnings of the year the usual dividend of 12 per cent. was paid, aggregating \$240,000, and the remainder of the earnings added to the surplus account. The capital of the company is \$2,000,000. The directors were reelected, as follows: Mark W. Watson (president), Joseph W. Marsh (vice president and general manager), James H. Willock, John Moorhead, Jr., John B. Jackson, B. F. Jones, Jr., Robert Pitcairn, J. N. Davidson, and William A. Conner.

THE HARTFORD RUBBER WORKS CO.

THE Hartford *Globe* (February 12) reports the local factories of this company to be giving employment to about 700 workers, with a weekly pay roll of more than \$10,000. During the week then last closed more than 30 tons of rubber were used. The daily output of bicycle tires was about 5000, in addition to vehicle tires. Important shipments of rubber mats to Japan and Russia were mentioned.

CONTINENTAL RUBBER CO. (JERSEY CITY).

THE Continental Rubber Co., on January 27, 1905, filed with the secretary of state of New Jersey a certificate decreasing its capital stock and creating one class of stock—preferred. The company was incorporated May 13, 1903, as the American Rubber Co., with \$100,000 capital authorized. June 29, 1903, the name was changed to the Continental Rubber Co., and a certificate filed referring to an increase of capital to \$1,000,000, of which amount there had been issued, to November 29, 1904—the date of the last annual report—\$250,000. The latest change

was to reduce the authorized capital to \$562,500. The object of the company, which has an office at No. 32 Broadway, New York, may be inferred from the fact that the several patents issued to William A. Lawrence, for the extraction of gum from the Mexican "Guayule" plant, have been assigned to it.—The Continental-Mexican Rubber Co., incorporated October 14, 1904, under New Jersey laws, with \$100,000 capital authorized, is understood to be a subsidiary concern, formed to care for the interests in Mexico of the parent company.

MR. A. M. STICKNEY.

THE subject of this sketch was born in Lowell, Massachusetts, in 1847. He was the son of Jonathan Gage Stickney, a noted American inventor, who was one of the pioneers in rubber manufacturing in Belgium, at Menin. It happened, therefore, that young Stickney was educated abroad, his schooling being in London and Menin. At the time of his graduation in the latter city he was notable by being the youngest boy by five years that had ever graduated there, and the school authorities recognized it by presenting him with a gold medal and wreath. When only 16 years old he enlisted in the Pennsylvania volunteer cavalry, and served in the Union armies until the end of the war. Later he joined the navy and cruised in the Mediterranean for about a year, when he returned to the United States.



His interest in the rubber business began when he took hold of what was known as the Wellman sole cutting machine, up to that time a complicated failure, and made of it one of the most ingenious and successful machines that the rubber trade is possessed of. These machines, by the way, are used in rubber shoe factories the world over, and in installing them Mr. Stickney has

visited Russia, Germany, Sweden, France, Great Britain, and other European countries, where he is very much at home as he speaks French, German, and Russian fluently. It is interesting to note that as this sketch appears Mr. Stickney lands in Europe for a four months' stay, during which he will visit all of the countries named, together with Finland and Italy. Mr. Stickney has always kept up his interest in the Grand Army, having been commander of Post 66, G. A. R., of Medford, Mass., for some four years. His residence is in Medford, where is the factory of the Wellman Sole Cutting Machine Co., and where much expert work is done in special machines for the rubber trade.

A NEW ATLANTIC CABLE.

ANOTHER Atlantic cable is to be laid by the Commercial Cable Co. (New York), and the matter has been advanced so far that bids for the cable and its placing have already been received. The route has been determined and it is expected that the cable will be in operation during the coming summer. President Clarence H. Mackay stated recently that no new stock would be issued on this cable, but that the cost had been

met by the Mackay companies because of a desire to keep the reserve fund of the Commercial Cable Co. intact. Mr. Mackay added that the first report of the affiliated Mackay companies to the shareholders would be made very shortly. The new cable will be of high speed and will embody the latest discoveries in this branch of electrical work, which is an intimation that a liberal amount of Gutta-percha will be required. The Commercial Cable Co.'s system already embraces three transatlantic lines, of an average length of 228 nautical miles, the total mileage, including connections, being 13,212. The same interests control the Commercial Pacific Cable Co., now operating a cable across the Pacific, with a length of over 7000 nautical miles.

PEERLESS MUTUAL AID ASSOCIATION'S RECEPTION.

MORE than 400 employés of the Peerless Rubber Manufacturing Co. and guests spent an enjoyable evening at Nungesser's Hall (North Bergen, New Jersey), on the evening of January 28, the occasion being a reception given by the Peerless Mutual Aid Association. Mr. Edward Busch, president of the association, presided at the supper table, and conveyed to the members the regrets of Superintendent R. B. Meany at being unable to attend. Mr. Archie Doyle responded to the "toast" "The Peerless," and was followed by a number of other speakers. The association was organized February 9, 1895, has a good sized fund in the treasury, and has made a liberal distribution of money in cases of sickness and death. In addition the association arranges during each year for several social events which are well attended and invitations to which are eagerly sought for. The officers are: Edward Busch, president; James Mulane, vice president; George Merritt, financial secretary; A. J. Everson, recording secretary; Louis Buechner, treasurer; George Everson, sergeant at arms; Fred Smith, David Danielson, and George Iler, trustees.

NEW YORK STOCK EXCHANGE TRANSACTIONS.

UNITED States Rubber Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Jan. 21	8,100	38	36	3,860	100 $\frac{1}{8}$	100
Week ending Jan. 28	8,900	37 $\frac{1}{8}$	34	3,400	100 $\frac{1}{8}$	98 $\frac{1}{8}$
Week ending Feb. 4	3,600	37 $\frac{1}{8}$	36 $\frac{1}{4}$	1,350	100 $\frac{1}{4}$	100
Week ending Feb. 11	20,850	39 $\frac{1}{8}$	36 $\frac{1}{4}$	10,814	109 $\frac{1}{4}$	100 $\frac{1}{8}$
Week ending Feb. 18	32,450	44	39 $\frac{1}{4}$	16,400	115	108 $\frac{1}{8}$
Week ending Feb. 25	16,225	44 $\frac{1}{4}$	41 $\frac{1}{4}$	3,400	114 $\frac{5}{8}$	112 $\frac{1}{4}$

RUBBER Goods Manufacturing Co.:

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
Week ending Jan. 21	2,900	27 $\frac{1}{8}$	26 $\frac{1}{4}$	100	95 $\frac{1}{8}$	95 $\frac{1}{8}$
Week ending Jan. 28	3,650	27 $\frac{1}{4}$	25 $\frac{1}{8}$	800	95 $\frac{1}{2}$	94
Week ending Feb. 4	2,000	27 $\frac{1}{8}$	25 $\frac{1}{4}$	100	94	94
Week ending Feb. 11	8,400	27 $\frac{1}{8}$	25 $\frac{1}{4}$	500	96 $\frac{3}{4}$	95 $\frac{1}{8}$
Week ending Feb. 18	11,000	27 $\frac{1}{4}$	25	220	97	97
Week ending Feb. 25	4,700	27	26	1,100	98 $\frac{1}{8}$	96 $\frac{1}{8}$

DRAWBACK ON AUTOMOBILE TIRES.

THE United States treasury department announces that on the exportation of automobiles manufactured by The Locomobile Co. of America (Bridgeport, Connecticut), with the use of imported tires, a drawback will be allowed equal in amount to the duty paid on the imported tires, less the legal deduction of 1 per cent. In response to an inquiry the Locomobile company advise THE INDIA RUBBER WORLD: "Occasionally we have a request from a customer to equip his car with Michelin or Continental tires; these, by the way, being the two best foreign tires. Of course, we are perfectly willing to put these on at additional cost and have done so in a number of cases."

Their regular equipment, however, embraces American-made tires.

MASSACHUSETTS MANUFACTURERS AND THE TARIFF.

GOVERNOR DOUGLAS, of Massachusetts, having recommended in his inaugural address certain action by the general court in respect to recommending action by the United States congress in the revision of the tariff and in the direction of reciprocity with Canada, numerous petitions have been presented to the general court by manufacturing interests in the state, protesting against any such action, on the ground that the consideration of such matters should be left to the congress. Among the signatures to such petitions are the Glendale Elastic Fabrics Co., Nashawannuck Manufacturing Co., George S. Colton, and the Easthampton Rubber Thread Co., all of Easthampton, Mass.

NATIONAL CEMENT AND RUBBER MANUFACTURING CO.

THE company above named have practically completed negotiations with Harvey Frost & Co., of England, whereby they will manufacture at their plant at Toledo, Ohio, and put upon the American market a new vulcanizer for automobile tires, for which a patent was granted recently to J. Harvey Frost. Mr. Frost, by the way, came to America to conduct the negotiations referred to. The National company were pioneers in the sale of vulcanizers for repairing bicycle tires, and with their experience in handling vulcanizers they feel disposed to give prominence to the new device mentioned here. The National company have been increasing their line of supplies adapted to work on automobile tires, besides which they have begun the sale of electric tape.

THE MITZEL RUBBER CO. (CARROLLTON, OHIO).

THE removal of the factory of this company from Akron was reported in this Journal in September last. The company have been very successful in their new location. For some time past they have been obliged to run their factory night and day, to keep pace with the extension of their business, which has involved the opening of a number of desirable new accounts. They are making a considerable line of druggists' sundries, besides dipped and molded goods in other lines. The factory now has its own electric lighting plant and fire protection service, in addition to the protection which they have from the city. The officers remain as last reported in these pages: H. F. Mitzel, president and treasurer; R. A. Mitzel, vice president; G. N. Eby, secretary. There have been some additions to the board of directors, however, with the result of strengthening the company, and enabling it to take care of an increased business. The capital has been increased from \$100,000 to \$125,000. The board now consists of the officers already named: L. D. Stockton, president of the Carrollton Savings and Banking Co.; J. R. Williams, M. D.; W. L. Handley, attorney; E. L. Henderson, manager of the Carrollton Pottery; C. W. Mitzel, and A. E. Mitzel. The erection of another building, 40 X 100 feet, is planned for the spring.

NEW INCORPORATIONS.

GLASKIN-COMSTOCK CO., January 17, 1905, under Minnesota laws; capital, \$50,000. Object, to deal in India-rubber and leather goods and mill supplies, at Duluth, Minnesota. The shareholders, directors, and officers are: Thomas H. Glaskin, president; Byron G. Segog, vice president; John W. Comstock, secretary and treasurer. Mr. Glaskin was recently vice president of Thomson-Glaskin Co. (Duluth), after having been for several years the Duluth representative of the W. S. Nott Co., an important rubber jobbing house in Minneapolis.

=Vacuum Cleaner Co., February 1, 1905, under New Jersey laws; to make and deal in vacuum sweeping apparatus; capi-

tal, \$1,000,000. Incorporators: David T. Kenney (patentee of the system) and William G. Besler, Plainfield, New Jersey, Harry B. Hollins, Robert W. De Forest, Thomas Ewing, Jr., and William K. Vanderbilt, Jr., New York city. Registered office: North Plainfield, New Jersey; principal office, Nos. 72-74 Trinity place, New York. Mr. Kenney, who formerly carried on the business under his own name, has been elected president of the corporation.

=Le Marquis Tire Co. (New York city), February 3, 1905, under New York laws, to act as American selling agents for the "Le Marquis" motor tires, made in France by Dufour Jr. & Son; capital \$25,000. Incorporators: Charles I. Scott, No. 32 West 33d street, (114 shares); Arthur C. Brady (15 shares); Henry Nicot (1 share). Mr. Scott has been elected president, and the office of the company will be at his address, as given above. Arthur C. Brady is secretary and treasurer. Thomas T. Baylor, No. 37 Liberty street, New York, is attorney for the company.

=The incorporation is reported in Canada, at the end of January, of The Commercial Rubber Co., Limited, at Montreal, with \$20,000 capital, "to manufacture rubbers, rubber boots, etc." The provisional directors include R. D. McGibbon, Douglas Armour, and K. J. Beardwood, all of Montreal, Mr. K. J. Beardwood being named as secretary. Messrs. McGibbon and Armour are included in the law firm of McGibbon, Casgrain, Mitchell & Surveyer (Montreal), who advise THE INDIA RUBBER WORLD that they are not yet at liberty to supply information for publication regarding the new company.

=The secretary of state for Illinois on January 13, 1905, issued a license to A. M. Jones, E. S. Jones, and Eugene L'Hote to open books of subscription to the capital stock of the Milford Rubber Works, the amount of capital named being \$50,000. It was stated at the office of the secretary of state on February 20 that no report had been received of the completion of the organization of the company; the postoffice addresses of the incorporators were not known at that office.

TRADE NEWS NOTES.

WILLIAM F. STEARNS has become connected with the New York Rubber Co. as head of their mechanical goods department at the factory at Matteawan, New York.

=Mr. M. Wachter, well known in the United States as a factory superintendent in insulated wire work, has accepted a position with the Yokohama Insulated Wire Co. (Yokohama, Japan), and is now on his way to his new post.

=Fred C. Vanderhoof, who has been appointed manager of the Buffalo (New York) branch of The Fisk Rubber Co., was recently connected with the Standard Spoke and Nipple Co., and is widely known in the tire purchasing trade.

=C. J. Bailey & Co. (Boston) have issued a revised price list of their rubber brushes and the other popular Bailey patented specialties.

=Frank M. Krapp, referee in bankruptcy in the matter of the Victor Rubber Co. (Springfield, Ohio), in bankruptcy, in the United States district court in the southern district of Ohio, has given notice of a first dividend of 8 per cent. upon all claims proved and allowed, the same to be paid within 5 days from March 1.

=Mr. Robert E. Hotchkiss, for several years superintendent of the shoe department of the factory of the Liverpool Rubber Co., Limited, is reported to have gone to St. Petersburg in a similar capacity, with the Russian-American India-Rubber Co. Mr. Hotchkiss was factory superintendent of the Boston Rubber Co. while that company was in existence. His father, the late Burritt M. Hotchkiss, was connected with the rubber industry at Naugatuck, Connecticut, for 47 years.

=The Amazon River Wireless Telegraph Co., whose offices are at No. 17 Battery place, New York, have been shipping additional material for the equipment of a system of communication between Pará and Manáos, the beginning of which was made by the establishment of two stations during the recent visit to the Amazon of Commodore E. C. Benedict and his party, on the yacht *Virginia*.

=Mr. Russel G. Colt, son of President Samuel P. Colt, of the United States Rubber Co., who was a member of Commodore Benedict's party on the recent cruise of the yacht *Virginia* to the Amazon, has become a member of the office force of the General Rubber Co., (New York), and, it is understood, will devote his attention hereafter to the crude rubber business.

THE selling department of The Beacon Falls Rubber Shoe Co. at the factory (Beacon Falls, Connecticut) and that at No. 106 Duane street, New York, have been consolidated. The headquarters will be at the latter address, the office being in charge of Mr. La Vete C. Warner, who has had charge hitherto of the salesmen who traveled from the mill. The New York business is conducted as a separate corporation, The Beacon Falls Rubber Shoe Co. of New York, of which Mr. Warner has been made treasurer, the president being Mr. Tracy S. Lewis.

=The Standard Underground Cable Co. (Pittsburgh) have established a selling office for the southwestern United States, at No. 521 Security building, St. Louis, in charge of Mr. E. J. Pietzker, who has been for some time past connected with the company's Chicago selling branch.

=Messrs. Earle Brothers, brokers (New York), favor us with their annual sheet of Rubber Statistics for 1904, showing monthly importations into the United States and Canada of the various grades, and the highest and lowest prices, on the same plan on which their reports have been based regularly since 1875.

=The Acker Process Co. (Niagara Falls, New York), are manufacturers on an important scale of Carbon Tetrachloride, a material of value to the rubber industry, and in relation to which an article appears elsewhere in THE INDIA RUBBER WORLD. The selling agents for this company are the General Chemical Co., with offices at No. 25 Broad street, New York, and in Philadelphia, Chicago, Pittsburgh, Cleveland, Syracuse, N. Y., and Buffalo, N. Y.

=Owing to a break in the machinery, the factory of the Lambertville Rubber Co. (Lambertville, New Jersey) was closed during the first week of February, although the company were unusually well supplied with orders.

=Messrs. Poel & Arnold (New York and Boston) have favored THE INDIA RUBBER WORLD with a table of the exports of India-rubber from Pará and Manáos during 1904, the list of exporters being headed by the related firms of Cmok, Schrader & Co. and Dusendschön & Co., whom Messrs. Poel & Arnold represent in the United States. The firms mentioned shipped 10,318,975 pounds to the United States and 11,200,988 pounds to Europe, or a total of 21,519,893 pounds out of a grand total of 67,558,062 shipped from the Amazon.

=The third annual masquerade ball of the I. B. Kleinert Benevolent Association, composed of employees of the I. B. Kleinert Rubber Co. (College Point, Long Island), held on Saturday evening, January 28, was largely attended.

=Suit has been filed against the Boston Woven Hose and Rubber Co. for \$20,000 damages, claimed by Margaret Hogan, who alleges that while taking rubber rings from a barrel, in the company's employ, her arm was injured by a projecting nail.

=The Pantasote Leather Co. (Passaic, New Jersey), engaged in the manufacture of an imitation leather known as "Pantasote," have begun proceedings to protect the trademark under

which their goods are advertised and sold. On February 17 a salesman employed in the department store of R. H. Macy & Co. (New York), was arraigned in a police court charged with selling a couch with a label designating its covering to be of "Pantasote." He gave bond for his appearance at the next term of the court of general sessions.

=Charles M. Loughhead was awarded a verdict for \$5000, by a jury at Akron, Ohio, on February 13, in his suit against the Goodyear Tire and Rubber Co. for \$15,000 damages, claimed for injuries sustained on account of a broken leg, on November 4, 1901, while working at a rubber tubing machine in the defendant's factory. He claimed that a clutch with which he attempted to stop the machine failed to work, and that his injury was the result.

=The Hohmann & Maurer Manufacturing Co. (Rochester, New York), manufacturers of special thermometers and pressure gages, whose goods are well known among rubber manufacturers, are erecting a large modern factory with some 60,000 feet of floor space, which they expect to have in working order not later than August or September of this year. While this will not of necessity improve the quality of "H. & M." goods, which are standard, it will enable the company better to take care of their largely increasing business.

=The Omaha (Nebraska) Bee reported, on February 12, on the rubber footwear trade: "The demand for rubber goods last week was exceptionally heavy for the time of year. Most of the orders were sent by express. The large number of these filling-in orders received last week shows conclusively that this long continued cold weather and snow has practically exhausted retailers' stocks so that the amount of goods carried over will be very small."

=A young man named McLeod was arrested at Buffalo, New York, on February 4, charged with attempting to obtain \$2800 worth of diamonds from a prominent New York jewelry firm by representing himself to be Edward R. Rice, a wholesale rubber goods dealer of Buffalo.

=The Fisk Rubber Co. (Chicopee Falls, Massachusetts) according to a late report were running their press and heating departments 24 hours a day, and other departments three nights a week until 9 o'clock, owing to having received orders largely in excess of any previous season.

=Nearly 600 appeals were made from the increased valuations on property made by the board of assessors at Bloomfield, New Jersey. Among the appeals was one of the Combination Rubber Manufacturing Co., who obtained a reduction of \$13,000 on the official valuation of their personal property.

=At the "Alice" mill of the Woonsocket Rubber Co. (Woonsocket, Rhode Island) the makers of arctics and lumberman's shoes have been working full time, and the production has been increased by 400 pairs per day.

=The plant of the Massillon Rubber Co. (Massillon, Ohio), erected two years ago and operated for a few months in the manufacture of a few specialties, has been purchased by George Rhine, of Massillon, who hopes to have it in operation shortly.

=Mr. John J. Nevin, of Jersey City, New Jersey, has been appointed general agent of The Bloomingdale Soft Rubber Works, (Paterson, New Jersey), manufactures of reclaimed and devulcanized rubber, to succeed the late Mr. Pitt Barrows, who has filled that position for 14 years.

=The Diamond Rubber Co. (Akron, Ohio), have lately made some good shipments to South America, one feature of interest of which is the inclusion of some belting of larger size than it has been usual to send to that part of the world. Also, good shipments to Australia.

=The annual meeting of the shareholders of the American Hard Rubber Co. was held at the office, No. 9 Mercer street, New York, on February 14.

=William R. Ray, chief engineer and master mechanic at the Melrose factory of the Boston Rubber Shoe Co., had an exciting experience after leaving the factory one evening early in February, and while on his way to his home in Malden. It was pay day, and he presumably had a substantial sum of money in his pocket. He was accosted by a man wearing a mask, who commanded him to hold his hands up, at the same time pointing a revolver in Mr. Ray's face. Instead of doing as he was told, Mr. Ray caught the masked man by the hand in which the revolver was clutched, and after a struggle of some minutes secured the weapon, after which the other fled in the darkness. Mr. Ray fired one shot at the retreating figure, but without effect so far as known.

=The Alling Rubber Co. (Bridgeport, Connecticut) have rented the store at No. 139 Bank street, Waterbury, where they will open about May 1 a retail rubber store. It is expected that Mr. W. C. Minor, who has been connected with the Alling company at Bridgeport for a number of years, will be in charge as manager. This will be the ninth rubber store in Connecticut operated by the Alling combination.

ADVANCE IN RUBBER FOOTWEAR.

ON February 8 the jobbers of rubber boots and shoes holding contracts with the United States Rubber Co. were notified as follows:

Because of the continued high price of crude rubber, on and after this day our prices are advanced as follows: First discount will be 20 per cent. instead of 25 per cent.; other discounts remain the same. Colonial and Tennis prices remain unchanged, but all discounts are subject to change without notice.

The changes have been figured out as equivalent to a net advance of 6½ per cent. over the prior prices in force. But the special discount of 5 per cent. offered at the beginning of the year on orders placed before April 1 will remain in effect until that date. The new discounts are printed herewith in bold face type, with the former rates printed underneath in ordinary type:

First quality (except Woonsocket and Meyer).....	20 @ 3%
	25 @ 3%
Woonsocket and Meyer brands.....	20 @ 5 @ 3%
	25 @ 5 @ 3%
Second quality (except Rhode Island).....	20 @ 10 @ 3%
	25 @ 10 @ 3%
Rhode Island brand.....	20 @ 10 @ 5 @ 3%
	25 @ 10 @ 5 @ 3%

United States Rubber shares had already gone to par; during the past month preferred stock has been quoted at 113 and higher. The unusually prolonged snow weather doubtless has had its effect, upon top of which comes the announcement of higher prices of products.

As for the dealers, it can hardly be said that the new prices have occasioned any surprise. There was cause for surprise rather, at the beginning of the year, when no advance was made. Coming at practically the middle of February the new prices cannot affect a great deal of the trade of the season now near an end. But in view of the fact that the latest prices are not guaranteed, and no reason exists for supposing that they will soon be lower, the trade may be expected to place orders early for next season, to escape another possible advance.

ACTION OF THE WESTERN JOBBERS.

IN view of reports current of the cutting of prices of rubber shoes, a special meeting of Chicago jobbers was called for February 2, by Mr. S. W. Campbell, secretary of the Western Association of Shoe Wholesalers, as a result of which ten members

of the association came together and signed a call for a general meeting, to be held at the Grand Pacific Hotel in Chicago, on February 8. By that date the United States Rubber Co. had announced an advance in prices, and it was felt by the members of the association who convened that this fact would tend largely to stiffen the market. It was unanimously resolved to adhere to the new schedule of discounts. The members of the association at once sent to all their customers a letter, of which the following is a copy:

DEAR SIR: At a joint meeting here of all handlers of rubbers, including United States and all outside rubber companies, have agreed under no circumstances or no conditions to sell the goods any different from United States Rubber Co. prices made to-day.

Now, we are put on honor in this matter and in such a way under no circumstances or conditions can we accept an order at less than the new prices made to day by the United States Rubber Co., which are 20, 5, and 3. [This includes the special 5 per cent. discount, to induce early orders, applicable to April 1.—THE EDITOR]

Now, if we cannot sell the goods this way we will not sell them at all. Now you will have no different prices to compete against, as we have all tied ourselves up stronger than ever before and no honorable business man will permit a salesman to do different. Now don't let your customers work you. We will send new prices on Combinations so that you will receive same at your Sunday address. Sign this letter and return to us at once. Any orders taken different than under these instructions will be refused by us at once.

Now, in this meeting to-day they claimed that there will be another advance of 5 per cent. on or before the first day of June, so your customers had better get in under the wet, as it may come at any time. Yours respectfully,

CANADA.

THE manufacturers of rubber footwear in the Dominion are expected to announce their lists about March 6. The lists and discounts probably will not vary widely from those in effect in the United States.

ANOTHER GOLF BALL SUIT.

A SUIT has been filed in the United States circuit court at New York, by Eleazar Kempshall, individually and as president of the Perfect Golf Ball Co., to restrain the Kempshall Manufacturing Co. from the manufacture of golf balls on the ground that the process used duplicates that by which the Kempshall ball is produced. The Kempshall Manufacturing Co. was organized to manufacture balls under patents granted to Mr. Kempshall. A suit for infringement of patents brought by the Haskell Golf Ball Co. was settled by an agreement under which the Kempshall company pay a royalty. Mr. Kempshall says:

"The new ball I am making is protected by patents which antedate those held by the Kempshall company, and were not taken out by me. The Haskell people, while establishing a priority of invention on golf balls packed with rubber thread, have not established the same claim regarding balls wound with a rubber band over a core, which is the gist of the Kempshall company's patents. Under the royalty agreement, the Kempshall company thought they could get along without my aid, and I have now gone into business on my own account. They are trying to stop me, but they won't succeed, for I am not using any of the patents that they own."

The Perfect Golf Ball Co. above referred to was incorporated recently under Maine laws with \$1,000,000 capital authorized. The offices are at No. 253 Broadway, New York.

[FROM OUR AKRON CORRESPONDENT.]

THE report from Washington that the attorney general of the United States may be petitioned to fight the "golf ball trust" does not give much concern to the Haskell Golf Ball Co. "In the first place, there is no golf ball trust," said Mr.

B. G. Work, vice president of the company. "The only trust or monopoly that exists in connection with the manufacture of golf balls comes from the government itself, through the issue of the patent under which the rubber covered ball is manufactured. The Haskell Golf Ball Co. own this patent. No others own or control it. Four companies in the United States manufacture these balls, but they do it under a license issued by our company. There are no other manufacturers of golf balls in the United States. The four companies are The B. F. Goodrich Co., of Akron; A. G. Spalding & Brothers, of New York; Kempshall Manufacturing Co., of New York; and Worthington Manufacturing Co., of Elyria, Ohio."

An interesting question has arisen in connection with the report that the alleged golf ball combine might get into the courts. It is claimed that Associate Justice Harlan, of the United States supreme court, would be disqualified to sit in such a case, because he is one of the greatest players in the Chevy Chase Club, of Washington, where the complaint against the "trust" is claimed to have originated. That these members look upon golf balls as being as much of a necessity as meat, Mr. Work characterized as not being quite a fair comparison. "Meat is a necessity and golf balls a luxury; that's the only difference," said Mr. Work.

The reported complaint of the Chevy Chase and Columbia club members in Washington is that the price of golf balls is too high, and they believe this is on account of a combination, which Mr. Work denies. The players figure that "topping" balls at 50 cents a clip with cleek or midiron is too expensive, and with the many lost and destroyed in playing, the game is a costly one. The report that the price of some kinds of balls is to be raised to \$9 a dozen has further alarmed the players. It is a peculiar fact, however, that the first kick has come from among the very swellest and wealthiest players.

Mr. Work estimates that nearly \$1,500,000 per year is spent in this country for golf balls, using the retail price as the basis of figuring. It is estimated that there are 300,000 golf players in the United States. The life of a ball is about one game. Akron is the principal center of the golf ball industry, and during the busy season over 1000 dozen balls per day are turned out here.

THE B. F. GOODRICH CO. IN BOSTON.

THE Boston branch office of The B. F. Goodrich Co. (Akron, Ohio), has been removed to larger premises, at No. 161 Columbus avenue, where the company occupy the first floor and basement, with an aggregate floor space of about 10,000 square feet. They have the best facilities for repairing tires and taking care of their trade. They carry a full stock of tires and bicycle sundries, in addition to a full line of mechanical rubber goods of standard patterns.

GLOBE MILLS RUBBER CO.

THE installation of machinery by the new rubber shoe manufacturing concern by the above name at Lawrence, Massachusetts, already mentioned in these pages, continues to make progress. Loring M. Monk, who has been elected president and general manager of the company, was associated with W. L. Sage during the latter's connection with the rubber shoe jobbing trade in a large way in Boston. Leonard C. Moore, treasurer of the corporation, is president and treasurer of the L. C. Moore Co., proprietors of a large department store in Lawrence. Others interested are Charles M. Evans, of the retail boot and shoe trade, and Walter Coulson, a leading local lawyer. It is understood that Mr. Moore still holds title to the Globe worsted mills, transfers not yet having been made to the company, which has been incorporated under Maine laws.

A RUBBER FACTORY FOR CINCINNATI.

REPORTS received at the office of THE INDIA RUBBER WORLD during the last days of February refer to bright prospects for the success of negotiations to remove to Cincinnati, Ohio, a rubber manufacturing plant operated, for a number of years by an important concern in another city. Mr. W. G. Brown, who formerly was in Cincinnati in charge of a rubber store, and who is spoken of as the leader in the new negotiations, was in Cincinnati on February 25 and informed THE INDIA RUBBER WORLD correspondent there that he expected to be able to make some definite announcement by the latter part of the following week. It was understood that he had an option on a certain rubber manufacturing plant which would expire on March 31, but in the event of failure of negotiations the owners of the plant would continue its operation and make no further effort to dispose of it. Our Cincinnati correspondent wrote on the date mentioned: "He has interested a number of prominent financial men and capitalists in the project, and nearly all of the capital stock of the proposed company has been pledged. The new company, the name of which has not been decided upon, will be capitalized at \$375,000 divided into \$250,000 of 6 per cent. preferred and \$125,000 common stock. Among those largely interested in the project are five of the directors of the German National Bank, including George H. Bohrer, the president of the bank; Edward Herzog, M. Schwartz, Fred A. Geier, and William C. Wacher. Dr. J. M. Crawford, ex-United States consul at St. Petersburg, is also taking an active interest in the company. Nothing definite has been decided upon as to officials of the proposed corporation. It is certain, however, that Mr. Brown will be one of them, but he will be general manager. There is some talk of electing him president. This, however, he states will be for the stockholders to determine. The probabilities are that the plant will be located in Norwood, an extensive manufacturing suburb of this city. Mr. Brown has been viewing a five acre tract of land near The Smith & Nixon Piano Co., but holds no option on it. There are several other sites under consideration. It is proposed to erect a modern fireproof manufacturing plant and begin operations with about 200 employés." — The rubber manufacturing company referred to in the above paragraphs advised THE INDIA RUBBER WORLD on February 27 that they had no statement to make regarding the mention of their company in the connection referred to.

A MONTREAL FIRM BURNED OUT.

FIRE occurred on the forenoon of January 28, in the factory and warehouse of the National Rubber Co. of Canada, manufacturers of waterproof clothing, at No. 425 Craig street Montreal, the origin of which has not yet been explained. The fire started on the third floor of the four story building occupied by the company, and did not reach the two lower floors, though their contents were seriously damaged by water. Mr. P. Glickman, proprietor of the business, estimates the total damage at \$40,000. The amount of insurance involved is officially stated at \$32,000 on stock and fixtures, and \$6000 on the building. The company have taken temporary quarters at No. 521½ Craig street, and there has been no interruption of business.

PERSONAL MENTION.

MR. JAMES E. BAXTER, chairman of the Leyland and Birmingham Rubber Co., of England, was a recent visitor to the United States, for the first time. Mr. Baxter was accompanied by his brother in law, Mr. William Huck.

=Mr. Thomas G. Richards, superintendent of the Boston Woven Hose and Rubber Co., gave an interesting lecture on the evening of February 2, before the Y. M. C. A. at

Cambridge, Massachusetts, on "Methods of Controlling Production, Wages, and Waste." This was one of a series of lectures in factory economy, designed for superintendents and foremen.

=A lecture on the processes of manufacturing rubber goods was delivered by Mr. Andrew McTernan, superintendent of the Tyer Rubber Co., on the evening of January 21 before the Burns Club, a social and literary organization of Andover, Massachusetts.

=Mr. Ernest E. Buckleton, general manager of the North Western Rubber Co., Limited (Liverpool, England), paid a flying visit to the United States during February. He sailed from New York for home on the *Oceanic* on the 15th.

=Messrs. Charles Jung, general manager, and William Haussner, superintendent of factories, of the Société Industrielle des Téléphones (Paris and Calais, France), an important concern in the insulated wire industry, were visitors to the United States during the past month.

=Mr. Frederick S. Minott, of New York, and Mrs. Marion Lowry Michler were married at Florence, Italy, on February 11. Mr. Minott was attended by his brother, Joseph Otis Minott, of New York. Mrs. Minott is a daughter of the late Commodore Reigert B. Lowry, U. S. N., and is the widow of Colonel Francis Michler. Mr. Minott is the son of the late Joseph A. Minott, of South Orange, New Jersey, whom he succeeded as secretary of the Goodyear Rubber Co. (New York). He is a graduate of Princeton University, in the class of '89, and is a member of the University, Princeton, and Strollers' clubs, of New York, and the Rockaway Hunt Club. Mr. and Mrs. Minott will take an automobile trip through Europe before returning to the United States.

=Mr. William D. Owen, of the Ubero rubber plantation properties, was reported recently to be at Cairo, Egypt, on ac-

count of his health, with the date of his return to the United States uncertain.

=Laurence W. Ahrens, of the L. W. Ahrens Stationery and Printing Co. (New York), died on February 14, in his forty-second year. The company referred to for a number of years held contracts for supplying the municipal government departments with stationery, including rubber goods.

ELEAZAR BUTTIN' IN.

ELEAZAR (*God-hath-helped) KEMPSHALL whose hundreds of golf ball patents, with their thousands of claims, were supposed to secure to the Kempshall Manufacturing Company, to whom they were assigned, any and all new ideas in their line, is out with his old company and also out with a new ball. He has with speed and dispatch organized another company, Maine laws, \$1,000,000 capital, and says he is working under patents not owned by the Kempshall company. That company say he is a doubly hyphenized infringer, and by the help of the court have temporarily injunctioned him. One who knows the insides of golf balls as few others do, asserts that the new ball has for a center, a shoe button, upon which the resilient material for the ball itself is "moulded, pressed, wound, twisted, braided, knit, tied, stretched, stuck, cemented, pasted, glued, soldered, laid, placed, put, nailed, tacked, spiked, bolted, pegged, dropped, planted, rolled, squirted, jabbed, dabbed, hung, flung, photographed, or otherwise attached." And it is quite likely true. Shoe buttons, oyster crabs and seed warts are almost the only available centers not covered by the Kempshall company's patents. Eleazar is just the sort of genius to butt in with a button. Now, with a button hook driver, a shoe horn putter, and a nine hole course of button holes, what a game golf will be?

*Literal interpretation of the name Eleazar.

REVIEW OF THE CRUDE RUBBER MARKET.

THE upward tendency of values, which has been in progress for some time past, and received a new impulse about the 20th of the past month, has reached a point where we have to report higher prices for both Pará and medium sorts than have ever been recorded in these pages, with the exception of our report on December 1. The extreme figure reported at that time was 1.30 to 1.32 for new Upriver fine, compared with which we now report 1.28 to 1.29, with proportional figures for other Pará grades.

Advices received February 18 stated: "At present there is no stock at Manáos unsold, but a liberal quantity is soon to arrive there, for which there are waiting orders with all the exporters. The advance in values since February 1 was due to the necessities of the exporters at Manáos; that is, to secure an increased quantity for certain buyers it was necessary to advance the market." A Pará advice, dated February 11 said: "With the increase of receipts the tone of the market began to lose buoyancy, the demand showing sign of weakness and prices becoming easier, but a fresh revival has taken place which has brought all favorable features to the surface again, as evidence that, whatever the course of events may be later on, at present the larger receipts, far from being an incumbrance, are a welcome feature."

The arrivals of Pará at New York have been very large, but for the most part have been delivered on contracts, leaving moderate lots for sale. The total receipts at the mouth of the Amazon to date appear in excess of the arrivals at the corresponding date of several years past, but the increase has not

been sufficient to lend hope that the season's production as a whole will show an advance. There yet remain of the season only four months, and usually March is the last month to show large receipts. The continued activity of the consuming markets coupled with the small visible supplies makes it impossible to predict an early decline in prices.

Attention may be called to the fact that our quotations for African sorts this month are considerably higher than have been reported at any previous time. Several important grades of Africans are quoted at over \$1, and even Assams as high as 99 cents. Reference to the first issues of THE INDIA RUBBER WORLD, (in 1889) shows that Sierra Leones were quoted at 35 @ 44, Congo sorts at 39 @ 42, and Assams at 55, which figures, compared with those now prevailing, indicate a much more marked appreciation in the value of African sorts than of Parás, which is due doubtless to the fact that manufacturers have made great advance in adapting these sorts to use.

Following is a statement of prices of Pará grades, one year ago, one month ago, and on February 28—the current date.

PARA.	Mar. 1, '04.	Feb. 1, '05.	Feb. 28.
Islands, fine, new.....	102@103	121@122	125@126
Islands, fine, old.....	@	none here	none here
Upriver, fine, new.....	106@107	124@125	128@129
Upriver, fine, old.....	108@109	none here	none here
Islands, coarse, new.....	66@ 67	70@ 71	75@ 76
Islands, coarse, old.....	none here	none here	none here
Upriver, coarse, new.....	83@ 84	92@ 93	94@ 95
Upriver, coarse, old.....	85@ 86	none here	none here
Cauchó (Peruvian) sheet.....	66@ 67	71@ 72	72@73½
Cauchó (Peruvian) ball.....	76@ 77	80@ 81	79½@ 80

The rate of increase for other sorts in New York has been even more marked, the figures being:

AFRICAN.		CENTRALS.	
Sierra Leone, 1st quality	100 @ 101	Esmeralda, sausages	84 @ 85
Massai, red	100 @ 101	Guayaquil, strip	72 @ 73
Benguela	78 @ 79	Nicaragua, scrap	83 @ 84
Cameroun ball	67 @ 68	Panama, slab	64 @ 65
Accra flake	32 @ 33	Mexican, scrap	84 @ 85
Lopori ball, prime	106 @ 107	Mexican, slab	64 @ 65
Lopori strip, prime	94 @ 95	Mangabeira, sheet	50 @ 59
Ikelema	none here	Assam	98 @ 99
Madagascar, pinky	84 @ 85	Borneo	42 @ 43

Late Pará cables quote:

	Per Kilo.	Per Kilo.	
Islands, fine	68600	Upriver, fine	78600
Islands, coarse	38600	Upriver, coarse	58300
		Exchange, 13½d.	

Last Manáos advices:

Upriver, fine	78750	Upriver, coarse	58050
		Exchange, 13½d.	

NEW YORK RUBBER PRICES FOR JANUARY (NEW RUBBER).

	1905.	1904.	1903.
Upriver, fine	1.18 @ 1.25	94 @ 1.05	86 @ 92
Upriver, coarse	90 @ 94	77 @ 83	71 @ 76
Islands, fine	1.14 @ 1.22	90 @ 1.02	84 @ 89
Islands, coarse	65 @ 71	56 @ 65	53 @ 62
Cametá	64 @ 71	55 @ 64	55 @ 64

The percentage of the various grades in the imports of India-rubber into the United States were as follows:

	1902.	1903.	1904.
Pará fine	39.64	37.63	34.48
Pará coarse	19.40	18.63	17.52
Centrals, Cauchó, and Pernambuco	11.86	12.29	14.68
African	29.10	31.45	33.32

Statistics of Para Rubber (Excluding Cauchó).

	NEW YORK.			
	Fine and Medium.	Coarse.	Total 1905.	Total 1904.
			1905.	1904.
Stocks, January 1, tons	51	18	69	56
Arrivals, January	1369	104	2073	1418
Aggregating	1420	123	2142	1474
Deliveries, January	1297	688	1985	1410
Stocks, January 31	123	94	757	64

	PARÁ.			
	ENGLAND.			
	1905.	1904.	1903.	1902.
Stocks, January 1, tons	200	370	305	175
Arrivals, January	3775	3760	2500	905
Aggregating	3975	4130	2865	1080
Deliveries, January	2719	3565	2710	725
Stocks, Jan. 31	1256	565	155	355

	1905.	1904.	1903.
World's visible supply, January 31, tons	2972	3717	2783
Pará receipts, July 1 to January 31	16,326	16,235	13,846
Pará receipts of Cauchó, same dates	1504	1519	924
Afloat from Pará to United States, Jan. 31	529	1418	740
Afloat from Pará to Europe, January 31	675	1020	585

Rubber Scrap Prices.

NEW YORK quotations—prices paid by consumers for car load lots, in cents per pound—show some slight changes since our last report, as follows:

Old Rubber Boots and Shoes—Domestic	6 1/8 @ 6 1/4
Do Foreign	5 1/4 @ 5 1/8
Pneumatic Bicycle Tires	4 1/4 @ 4 1/2
Solid Rubber Wagon and Carriage Tires	6
White Trimmed Rubber	8 1/8 @ 8 1/4
Heavy Black Rubber	4
Air Brake Hose	2 1/2 @ 2 1/2
Fire and Large Hose	2 @ 2 1/4
Garden Hose	1 3/4 @ 1 3/4
Matting	2 @ 1

In regard to the financial situation, Albert B. Beers (broker in India-rubber, No. 68 William street, New York), advises us:

"The same monetary conditions have continued through January as reported for February, rates being easy with a good demand for paper from both city and out-of-town banks, at 4 @ 5 per cent. for the best rubber names, and 5 1/2 @ 6 per cent. for the smaller concerns."

United States Crude Rubber Imports (Official).

FROM—	1902.	1903.	1904.
United Kingdom... pounds	7,604,134	8,556,972	8,381,894
Germany	2,370,353	2,176,346	2,766,724
Other Europe	7,220,369	9,245,077	11,036,558
Central America	1,062,184	1,133,814	1,382,528
Mexico	263,181	286,260	335,917
West Indies	47,355	16,286	12,886
Brazil	30,504,703	31,950,915	34,564,419
Other South America	1,230,902	1,759,904	1,923,314
East Indies	509,609	612,345	1,470,516
Other Countries	29,467	6,201	15,304
Total	50,851,257	55,744,120	61,889,758
Value	\$25,158,591	\$35,152,642	\$43,784,297
Average value per pound	49.4 cents.	63.1 cents.	70.7 cents.

Nicaragua.

	RUBBER EXPORTS FROM BLUEFIELDS.		
	1904.	Pounds.	Gold Value?
July 1-September 30	57,666		\$38,407.94
October 1-December 31	94,810		65,527.07
Total	152,476		\$103,935.01

Rubber Receipts at Manaos.

DURING January and seven months of the crop season for three years [courtesy of Messrs. Witt & Co.]:

FROM—	1905.	1904.	1903.	1905.	1904.	1903.
Rio Purús—Acre	1767	1650	720	3776	3851	2635
Rio Madeira	194	247	178	1880	1791	1478
Rio Jurúa	546	675	1226	1730	2110	2015
Rio Javary—Iquitos	239	344	257	2055	1795	1252
Rio Solimões	169	104	154	603	570	1076
Rio Negro	164	113	126	339	267	325
Total	3079	3133	2661	10,383	10,384	8781
Cauchó	1092	712	596	1742	1613	1196
Total	4171	3845	3257	12,125	11,997	9977

Antwerp.

TO THE EDITOR OF THE INDIA RUBBER WORLD: As has already been intimated in your pages our monthly inscription sale on January 27, when about 475 tons out of 502 offered were sold, resulted in a substantial advance over estimation. The average advance was about 3 per cent. The fine Upper Congo sorts realized especially high prices—in some cases 6 and 7 per cent. over the monthly sale of December 16. Since the January sale about 59 tons have changed hands at very firm prices. The next large sale will take place on February 22, when about 278 tons will be exposed. Among the principal lots, the following are especially worth mentioning:

	Valuation.
28 tons Uelé strips	francs 10.50
27 " Aruwimi	10.20
14 " Upper Congo Pieces	10.
13 " Lopori I	11.
48 " Lopori II	7.75
14 " Upper Congo ball	10.90

C. SCHMID & CO., SUCCESEURS.

Antwerp, February 14, 1905.

[CABLE reports indicate that the prices realized on February 22 exceeded all records. All the offerings found buyers, some lots at 70 centimes [=about 6 1/2 cents] above the valuations based upon the January sale.]

RUBBER ARRIVALS AT ANTWERP.

FEB. 1.—By the *Anversville*, from the Congo:

Bunge & Co.....	(Société Générale Africaine) kilos	156,000
Do	(Komité Special Katanga)	6,000
Do	(Société "La Kotto")	1,000
Do	(Société des Sultanats du Haut Ubangi)	9,000
Comptoir Commercial Congolais.....		24,000
Société A B I R.....		8,000
Société Coloniale Anversoise.....	(Cie. de Lomami)	16,000
Do	(Belge du Haut Congo)	6,000
Do	(La Lulonga)	5,000
Do	(Sud Kamerun)	3,000
L. & W. Van de Velde.....	(Cie. du Kasai)	83,000
Société Générale de Commerce.....	(Société La Lobay)	3,000
Do	(Alimainne)	7,000
Comptoir des Produits Coloniaux.....		
.....(Société Ekela-Kadei Sangha)		17,000
Cie. Commerciale des Colonies.....		
.....(Société La Haut Sangha)		8,000
Do		1,000
Charles Dethier.....	(Société La M'Poko)	11,000
		362,000

Iquitos Rubber Exports, 1903.

DESIGNATIONS.	New York.	Liverpool.	Havre.	Total.
Jebe fino.....kilos	1,937	259,627	227,713	489,277
Jebe entrefino.....		12,907	28,445	41,352
Jebe sernamby.....		126,730	90,148	216,878
Jebe débil.....		14,870	3,182	18,052
Caucho.....	573	35,130	16,024	51,736
Caucho sernamby.....	3,069	564,856	351,154	919,079
Total, 1903	5,579	1,014,129	716,666	1,736,374
Total, 1904.....	30,171	1,236,331	644,090	1,910,601

[The first three items relate to *Herera* rubber—fine, medium, and coarse. "Jebe débil" is also known as "weak rubber." The remaining two items are Caucho ball and slab.]

IQUITOS EXPORTERS OF RUBBER, 1903.

Julio C. Arana.....kilos	181,665	Barcia Hermanos.....	69,363
Wesche y Cia.....	170,402	Benasayag, Toledo y Cia.....	55,963
Kahn & Polack.....	168,044	G. Delgado & Hijo.....	47,631
Kahn y Cia.....	156,321	Meza & Brügmann.....	42,683
Luis F. Morey.....	155,905	Farache y Hermano.....	22,877
David Cuzes.....	122,804	Tomás Ramírez y Hno.....	10,229
Marius & Levy.....	119,315	J. Dahmen, Jr.....	2,955
Manuel Rocha é Hijos.....	115,686	Machado y Rivero.....	2,457
Pinto Hermanos.....	110,962	Guillermo A. de Brito.....	935
Hermández, Magne y Cia.....	98,164	Total.....kilos	1,736,374
A. Morey y Cia.....	82,005		

Liverpool.

WILLIAM WRIGHT & CO. [report February 1]:

Fine Para.—The market has been fairly active, but the paucity of stock and high prices ruling prevent business. Prices have advanced 2d. per pound; this has been caused by delayed receipts and strong demand in the exporting markets. The longer the delay in receipts continues the less chance there is, in our mind, of any serious break in values; taking into account the almost entire lack of reserve of stock and present rate of demand, manufacturers will, we think, do well to take advantage of every temporary break in prices. Spot market has been firm, but closes easier, value of Upriver 5s. 3d., Island 5s. 1d. Forward sellers have been acting very cautiously, otherwise a large business would have resulted. Near positions close at 5s. 3½d.; February-March, 5s. 3½d.; and March-April 5s. 3d.

Africans have been in demand, and prices have advanced all round. Gold Coast lumps have been in chief demand, this grade being scarce, and a good business has been done chiefly in old up to 2s. 4½d., and new, for delivery, up to 2s. 3½d., January-February. Red Sierra Leone luggers have advanced to 3s. 11½d., owing to scarcity.

EDMUND SCHLÜTER & CO. report [January 31]:

Pará rubber was firm during January. With a continued good demand (especially in the United States) the arrivals of rubber in Pará and Manáos were readily absorbed, and prices advanced gradually to 5s. 3½d. for fine hard in warehouse and 5s. 3d. forward delivery, with 2d. less for soft cure. The highest prices were not maintained at the close. The visible supply of Pará grades on December 31 and January 31 was:

December 31.....tons	1900.	1901.	1902.	1903.	1904.	1905.
January 31.....	4219	4444	3365	3351	2646	...

[a 1100 in bankers' hands.]

The increase of about 1100 tons [in January over December] in the visible supply is more than was expected by the market, and it may cause some decline, but it must not be overlooked that the larger proportion of the rubber in sight is already sold and that a large proportion (700 tons) consists of Cauchó. The quantity afloat to Europe is less by about 300 tons than on January 31, 1904, and the stock by 200 tons. While a decline in the price of fine Pará rubber would be welcomed by the whole trade, the elements that have made for higher prices (no increase in supplies and continued good demand) remain, and they will continue to influence the value, irrespective of temporary fluctuations.

London.

PLANTATION RUBBER (PARA SEED).

January 20 Auction.—Ceylon and Straits: 15 packages offered and sold. Fine thin biscuits at 6s. 1d. [= \$1.48]; ditto rather moldy and damp at 6s.; ditto inferior at 5s. 9d.; scrap at 4s. *Also:* Forty-three packages *Manicoba* offered and sold. Fine clean sheet at 4s. 5½d. @ 4s. 7d.; good clean scrap at 3s. 3½d. @ 3s. 4d.

February 3 Auction.—Twenty-seven packages offered and 28 sold. Ceylon fine biscuits at 6s. @ 6s. 1½d. [= \$1.49]; fair to good fall scrap at 4s. 3½d. @ 4s. 4½d.; dirty and perished at 3s. 3d. Straits fine biscuits at 6s. 1½d.; fair scrap and sheet at 4s. *Also:* *Manicoba* fine clean thin plantation sheet at 4s. 8½d. [= \$1.14½]; fair, little mixed 4s. 6½d.

February 10.—Value of Ceylon fine thin biscuits on the spot is 6s. 2d. @ 6s. 3d. [= \$1.50 @ \$1.52].

February 17 Auction.—Thirty packages sold, fine thin Ceylon biscuits 6s. 4d. @ 6s. 4½d. [= \$1.55]; mixed colored inferior, 6s. @ 6s. 2½d.; fine clean scrap 4s. 6d. @ 4s. 8d. Straits, fine biscuits and sheet 6s. 3½d. @ 6s. 4½d.; 4s. 3d. *Also:* *Manicoba*, 45 packages sold, good clean thin plantation sheet, 4s. 8½d.; good scrap 3s. 5d.

Ceylon Exports (Plantation Rubber).

To	1903.	1904.
Great Britain	pounds 39,456	61,137
" Germany	1,672	7,221
" Australia .....	...	1,884
" United States	400	1,381
" Holland .....	...	127
" India .....	...	119
" Belgium	156	111
" France .....	...	60

Total..... 41,684

[Total, 1902—21,168 pounds; total, 1901—7392 pounds.]

Rotterdam Rubber Statistics.

INDIA-RUBBER ARRIVALS (KILOS).

Thimbles, red.....	142,100	Soudan.....	...	69,700
Congo ball.....	28,800	All other.....	...	7,700
Kassai, red.....	336,500			
Kassai, black.....	76,300	Total, 1904.....	1,218,100	
Upper Congo.....	532,600	Total, 1903.....	799,300	
Sierra Leone.....	5,500	Total, 1902.....	991,700	
Mozambique.....	1,500	Total, 1901.....	853,250	
Java and Sumatra.....	17,400	Total, 1900.....	877,450	

Stocks, January 1... 68,400 64,000 8,100 67,300 80,600

BALATA ARRIVALS (KILOS).

1904.	1903.	1902.	1901.	1900.
Surinam sheet.....	166,900	281,000	244,500	211,950
Venezuela block.....	29,200	22,000	30,700	31,450

Total..... 226,100 303,000 275,200 243,400 185,100

Stocks, end year... 174,100 3,700

GUTTA-PERCHA (TONS).

1904.	1903.	1902.	1901.	1900.
Stocks, first of year... 194	218	263	185	307
Arrivals during year.... 38	148	267	314	280

Aggregating..... 232 366 530 499 557 675

Sales during year..... 58 172 312 236 402 368

Stocks, end of year... 174 194 218 263 185 307

Rotterdam.

A. KNOTTENBELT & Co. report [January 31]:

NOTWITHSTANDING the somewhat unsettled condition of the Pará market, where the changes in prices were, after all, of small importance, the tone of our market, since our last report, remains strong for medium qualities, and the lots of African rubber offered for public sale (by written bids) created considerable interest among buyers. The following quantities were sold:

About 15150 Kilos Upper Congo
About 1050 " Congo
About 4550 " red Thimbles

Prices again showed an increase over those of the preceding sale. Orders had come in from different points, and the quantity offered could easily have been sold several times over.

Balata.—There has been considerable demand for Surinan leaf, and some small lots changed hands. These transactions have caused holders to remain very firm, and they are confident that, after the long continued reticence, buyers will at last be compelled to come to them, especially as the prospects for a considerably smaller crop next season can no longer be denied. There have been no transactions in Venezuela block, on account of a lack of arrivals.

Bordeaux.

R. HENRY, successor to the ancient house of Jules Pichard, supplies the following details of importations of Cauchouc for the past two years:

DESIGNATION.	1903.	1904.	DESIGNATION.	1903.	1904.
Soudan twists.....	550,500	368,507	Bassam cakes.....	2,285	
Soudan niggers.....	159,400	229,608	Congo sorts.....	50,000	46,600
Conakry niggers.....	148,000	178,700	Bissau Guinée Poitugaise.....	3,100	
Gamble or Cassamance.....	144,400	111,355	Java and Sumatra.....	2,500	16,625
Lahou twists.....	63,570	57,000	Madagascar.....	3,500	45,700
Lahou niggers.....	10,900	29,010	Central America*.....	3,000	5,000
Lahou cakes.....	11,000	10,375	Balata.....	2,650	
Lahou Gourous.....	5,200		New Caledonia.....	300	900
Bassam lumps.....	30,000	22,300	Total.....	kilos 1,118,000	1,182,708
Bassam niggers.....	6,000		[*Including Mexico.]		

SUMMARY FOR FOUR YEARS PRECEDING.

	1899.	1900.	1901.	1902.
Kilos	175,589	239,532	235,380	678,000

It is pointed out that the failure of the importations at Bordeaux during the past year to show the customary rate of increase over the preceding year was due largely to the notable falling off in the production of Soudan sorts. This situation is a matter of no small concern to the Bordeaux trade, the leaders of which are urging the necessity of governmental measures to preserve the rubber trade of the French colonies in West Africa, both in the volume of production and its quality. The governor general, before his departure for Dakar in October last, was strongly urged in Bordeaux to at once give effect to the decree regulating the condition of rubber at the time of shipment, and later a petition was sent to him, and it is hoped that these efforts will result in the suppression of fraud and the improvement of the product. It is only by such means that the confidence of consumers can be secured, and the standard of the Bordeaux market maintained. Importers are urged to recommend that their agents in Africa take proper care of the rubber passing through their hands, and to see that each quality is packed separately and designated by special marks. It would be desirable to have all lots separated on their arrival at such points as Bammako, Kayes, and Saint Louis, and the pitchy portions separated from the balls or cakes. The receipt of merchandise selected in such a manner would be very much appreciated by purchasers. Quotations for the principal French African varieties have followed the variations in the general

market during the year, though the poorer quality of a number of lots from the Soudan has caused a notable decline in prices for rubber of this description, as will be seen from the figures which follow.

BORDEAUX COMPARATIVE PRICES.

[In Francs per Kilogram.]

DESIGNATIONS.	January.	December.
Soudan twists.....	9.30@ 9.50	8.50@ 8.80
Soudan niggers.....	9.40@ 9.70	9. @ 9.75
Conakry niggers.....	10.10@ 10.35	10.40@ 10.75
Gambia A P.....	8.20@ 8.50	8.10@ 8.35
Gambia A	7.20@ 7.50	7.70@ 7.80
Gambia A M.....	6.75@ 7.	6.60@ 6.80
Gambia B.....	5.75@ 6.	5.60@ 5.80
Gambia C.....	4.85@ 5.10	4.60@ 4.80
Lahou cakes.....	8. @ 8.25	7.50@ 7.75
Lahou twists	9.05@ 9.25	8.40@ 8.70

PRICES (IN FRANCS PER KILO) FEBRUARY 15.

Conakry niggers.....	10.75@10.90	Cassamance A.....	7.80@8.80
Soudan do red.....	9.80@10.25	Cassamance AM.....	6.80@7.20
Soudan do white	9.40@ 9.75	Cassamance B.....	5.80@6.20
Soudan twists.....	8.70@ 8.90	Lahou niggers 1.....	9.15@9.50
Madagascar Majung.....	6.50@ 7.25	Lahou niggers 2.....	8.20@8.80
Do Tamatave 8.60@ 9.		Lahou cakes.....	7.50@7.70
Bassam lumps, large 5.90@ 6.20		Mexican slabs.....	8.80@9.20

Gutta-Percha.

THE Straits Times (Singapore, December 31), in its trade review for 1904, says:

The Gutta-percha trade still continues unsatisfactory, exports falling by 30 per cent., and in the demand for the United Kingdom by over 80 per cent. A contract with a local German firm for supplies necessitated by the agreement between the Dutch and German governments for cable-laying accounts for exports to the continent keeping well up. Prices were even more than at the corresponding dates last year and very low qualities predominate. Borneo rubber has risen in quantity by over 100 per cent., and Jelutong rubber evidences a continuous increase.

SINGAPORE exports of Gutta-percha for five years are thus reported by Weise & Co., of Rotterdam :

Tons.....	1900.	1901.	1902.	1903.	1904.
6158	5592	4236	3286	2886	

IMPORTS FROM PARA AT NEW YORK.

[The Figures Indicate Weights in Pounds.]

February 4.—By the steamer *Basil*, from Manáos and Pará :

IMPORTERS.	Fine.	Medium.	Coarse.	Caucho.	Total.
Poel & Arnold.....	168,400	40,300	96,000	45,700=	350,400
General Rubber Co.....	205,700	36,300	85,300	4,200=	331,500
A. T. Morse & Co.....	104,600	23,600	122,100	12,200=	262,500
New York Commercial Co.....	120,100	34,800	31,800	6,400=	193,100
Lionel Hagenaars & Co..	11,900	.....	5,300	.....=	17,200
Hagemeyer & Brunn.....	10,200	.....	4,800	.....=	15,000
Total	620,900	135,000	345,300	68,500=	1,169,700

February 16.—By the steamer *Maranhense* from Manáos and Pará :

A. T. Morse & Co.....	328,300	64,300	146,000	110,700=	649,300
Poel & Arnold.....	237,400	53,600	134,400	94,400=	519,800
General Rubber Co.....	276,100	43,200	135,900	5,700=	460,900
New York Commercial Co.....	160,400	38,900	41,600	48,100=	289,000
Neale & Co.....	2,700	300	22,800	.....=	25,500
Hagemeyer & Brunn.....	9,000	1,900	14,700	.....=	25,600
Edmund Reeks & Co.....	9,700	.....	15,200	.....=	24,900
Lionel Hagenaars & Co..	8,800	.....	7,200	.....=	16,000
G. Amslinc & Co.....	2,900	600	5,700	.....=	9,200
Total	1,035,300	202,800	523,500	258,900=	2,020,500

[NOTE.—The steamers *Hubert* and *Bernard*, from Pará, are due at New York on March 1 and March 7 respectively with 1030 tons and 1000 tons Rubber.]

PARA RUBBER VIA EUROPE.

POUNDS.

JAN. 30.—By the <i>Etruria</i> =Liverpool:	23,500	FEB. 2.—By the <i>Advance</i> =Mollendo:	7,000
General Rubber Co. (Fine).....	7,000	Chicago Bolivian Rubber Co. (Fine).....	

FEB. 2.—By the *Teudonic*=Liverpool:

Poel & Arnold (Fine).....	15,000	Windmuller & Reolker (Caucho).....	7,000
		22,000	

FEB. 8.—By the *Armenian*=Liverpool:

A. T. Morse & Co. (Coarse).....	11,000
---------------------------------	--------

FEB. 14.—By the *Umbria*=Liverpool:

General Rubber Co. (Fine).....	34,000
--------------------------------	--------

FEB. 16.—By the <i>Majestic</i> =Liverpool:	
Poel & Arnold (Coarse).....	30,000
FEB. 20.—By the <i>Campania</i> =Liverpool:	

General Rubber Co. (Fine)..... 11,500

OTHER ARRIVALS IN NEW YORK

CENTRALS.

	POUNDS
JAN. 24.—By the <i>Tennyson</i> =Bahia:	
J. H. Rossbach & Bros..... 18,500	
Hirsch & Kaiser..... 13,500	32,000

JAN. 24.—By the <i>Allegany</i> =Carthagena:	
Aug. T. Hanneburg..... 4,500	
D. A. De Lima & Co..... 3,000	
Lawrence Johnson & Co..... 1,800	
Kunhardt & Co..... 1,000	
H. B. Claffin & Co..... 1,000	
Isaac Kuble & Co..... 1,000	
Isaac & Samuels..... 800	13,100

JAN. 26.—By the <i>Grangense</i> =Ceara:	
Emile Boris..... 11,000	

JAN. 26.—By the <i>Allianca</i> =Colon:	
E. B. Strout..... 3,700	
J. A. Medina & Co..... 2,800	
Gabriel Perigault..... 3,000	
Isaac Brandon & Bros..... 1,800	
American Trading Co..... 1,900	
Eggers & Heinlein..... 900	
Meyer & Hecht..... 700	
Jimenez & Escobar..... 400	14,900

JAN. 27.—By the <i>Moltke</i> =Hamburg:	
Winter & Smillie..... 6,500	

JAN. 28.—By the <i>El Dia</i> =New Orleans:	
A. T. Morse & Co..... 9,000	
Manhattan Rubber Mfg. Co..... 2,000	11,000

JAN. 28.—By the <i>Grenada</i> =Trinidad:	
Thebaud Brothers..... 3,500	

JAN. 30.—By the <i>Monterey</i> =Mexico:	
H. Marquardt & Co..... 3,800	
Fred. Probst & Co..... 1,200	
Harburger & Stack..... 1,500	
E. Steiger & Co..... 500	
E. N. Tibbals & Co..... 1,000	7,200

FEB. 1.—By the <i>Terence</i> =Bahia:	
J. H. Rossbach & Bros..... 12,000	

FEB. 2.—By the <i>Advance</i> =Colon:	
G. Amsinck & Co..... 10,200	
A. Santos & Co..... 5,200	
J. A. Medina & Co..... 4,100	
W. R. Grace & Co..... 3,800	
Lawrence Johnson & Co..... 7,800	
Dumarest Bros. & Co..... 3,000	
Roldau & Van Sickle..... 3,000	
Otto Gerdall..... 1,900	
Gabriel Perigault..... 21,00	
Belgian Co. Cent. Am..... 1,800	
E. B. Strout..... 1,900	
A. Rosenthal's Sons..... 1,300	
National Sewing Mach. Co..... 1,200	
A. M. Capen's Sons..... 1,300	
Lamman & Kemp..... 1,000	
American Trading Co..... 1,000	
Pedro A. Lopez..... 1,000	
Silva, Bussenius & Co..... 1,000	
Smithers, Nordenholz & Co..... 900	53,600

FEB. 3.—By the <i>El Sud</i> =New Orleans:	
Manhattan Rubber Mfg. Co..... 7,500	
A. N. Rotholz..... 1,500	
A. T. Morse & Co..... 3,500	
G. Amsinck & Co..... 1,500	14,000

FEB. 4.—By the <i>Lucania</i> =Liverpool:	
Wallace L. Gough..... 9,000	

FEB. 6.—By the <i>Mesaba</i> =London:	
Poel & Arnold..... 11,500	

FEB. 7.—By the <i>Altai</i> =Carthagena:	
Pedro A. Lopez..... 5,000	
Banco de Exportasos..... 3,000	
Isaac Brandon & Bros..... 1,000	9,000

FEB. 7.—By the <i>City of Washington</i> =Colon:	
Hirzel, Feitman & Co..... 17,600	
G. Amsinck & Co..... 3,700	
Piza, Nephews & Co..... 3,200	24,500

FEB. 9.—By the <i>Carib II</i> =Honduras:	
Eggers & Heinlein..... 6,700	
Herman Angler..... 2,500	
Bonham & Co..... 2,000	
H. W. Peabody & Co..... 1,000	
G. Amsinck & Co..... 1,000	
A. S. Lascelles & Co..... 500	
K. Mandell & Co..... 400	14,100

CENTRALS—Continued.

FEB. 10.—By the <i>Orizaba</i> =Colon:	
Hirzel, Feitman & Co..... 7,500	
G. Amsinck & Co..... 2,800	
Gabriel Perigault..... 4,400	14,700

FEB. 11.—By the <i>El Dorado</i> =New Orleans:	
Manhattan Rubber Mfg. Co..... 9,000	
A. T. Morse & Co..... 8,600	
E. B. Strout..... 3,000	
J. A. Medina & Co..... 1,500	21,500

FEB. 11.—By the <i>Pretoria</i> =Hamburg:	
George A. Alden & Co..... 34,000	
A. T. Morse & Co..... 3,000	37,000

FEB. 14.—By the <i>Proteus</i> =New Orleans:	
A. T. Morse & Co..... 8,000	
George A. Alden & Co..... 3,000	
A. T. Morse & Co..... 3,000	11,000

FEB. 14.—By the <i>Surnia</i> =Colombia:	
D. A. DeLima & Co..... 2,000	
Roldau Van Sickle..... 2,000	
Meoke & Co..... 1,500	
American Trading Co..... 1,200	
August T. Hanneburg..... 1,000	
Lawrence Johnson & Co..... 1,200	
Banco de Exportasos..... 900	
Joaquin Ferro..... 900	10,700

FEB. 16.—By the <i>Segurana</i> =Colon:	
Dumarest Bros. & Co..... 4,500	
Hirzel, Feitman & Co..... 4,200	
G. Amsinck & Co..... 4,300	
Roldau Van Sickle..... 3,600	
A. Santos & Co..... 2,900	
Lawrence Johnson & Co..... 1,500	
American Trading Co..... 1,600	
Eggers & Heinlein..... 1,100	
Fidanque Bros. & Co..... 1,200	
Gabriel Perigault..... 1,100	
Bortling & De Leon..... 600	26,600

FEB. 17.—By the <i>Cida</i> =New Orleans:	
Manhattan Rubber Mfg. Co..... 3,000	

FEB. 18.—By the <i>Havana</i> =Mexico:	
Harburg & Stack..... 3,200	
R. Steiger & Co..... 1,000	
H. Marquardt & Co..... 1,000	
L. N. Chemedini & Co..... 1,500	7,000

FEB. 18.—By the <i>Carou</i> =Bahia:	
J. H. Rossbach & Bros..... 22,500	
Hirsch & Kaiser..... 15,000	
A. D. Hitch & Co..... 11,500	49,000

FEB. 20.—By the <i>St. Louis</i> =London:	
A. T. Morse & Co..... 11,000	
J. H. Rossbach & Bros..... 10,000	
Poel & Arnold..... 11,000	32,000

FEB. 20.—By the <i>Byron</i> =Bahia:	
Hirsch & Kaiser..... 16,000	
J. H. Rossbach & Bros..... 10,000	26,000

FEB. 21.—By the <i>Bluecher</i> =Hamburg:	
Gabriel Perigault..... 9,200	
J. A. Medins & Co..... 8,000	
Lawrence Johnson & Co..... 3,200	
George A. Alden & Co..... 3,000	
Isaac Brandon & Bros..... 2,000	
K. B. Straub..... 2,000	
American Trading Co..... 1,200	
A. Rosenthal's Sons..... 1,000	
A. Held..... 1,000	
D. A. De Lima & Co..... 1,000	
Pedro A. Lopez..... 800	
G. Amsinck & Co..... 700	
Meyer Hecht..... 600	20,000

FEB. 23.—By the <i>Allied</i> =Colon:	
G. Amsinck & Co..... 50,000	
Earlie Brothers..... 16,000	
Poel & Arnold..... 22,500	

FEB. 23.—By the <i>Indra</i> =Colon:	
Hirzel, Feitman & Co..... 16,000	
Poel & Arnold..... 22,500	
Rubber Trading Co..... 16,000	

||
||
||

FEB. 14.—By the Minnetonka=London:
Poel & Arnold 68,000
A. T. Morse & Co. 9,000

George A. Alden & Co. 5,500
FEB. 14.—By the Kennebec=Singapore:
George A. Alden & Co. 20,000
Robert Brans & Co. 30,000
D. A. Shaw & Co. 30,000
Joseph Cantor. 18,000
78,000

FEB. 15.—By the Graf Welders=Hamburg:
A. T. Morse & Co. 11,000
Eastern Trading Co. 3,000
14,000

FEB. 16.—By the Manitou=London:
Poel & Arnold. 8,000

FEB. 16.—By the Bries Isel=Singapore:
George A. Alden & Co. 55,000
Hebler & Co. 20,000
Pierre T. Bettis. 20,000
Robert Brans & Co. 10,000
105,000

GUTTA-JELUTONG.

JAN. 26.—By the Menominee=London:
George A. Alden & Co. 215,000

FEB. 4.—By the Indrawadi=Singapore:
George A. Alden & Co. 175,000
Robert Brans & Co. 200,000
Winter & Smillie. 280,000
625,000

FEB. 7.—By the Knight St. George=Singapore:
Poel & Arnold. 215,000
Robert Brans & Co. 80,000
265,000

FEB. 8.—By the St. Hugo=Singapore:
George A. Alden & Co. 265,000
Pierre T. Bettis. 55,000
Wallace L. Gough. 70,000
D. A. Shaw & Co. 80,000
440,000

FEB. 15.—By the Kennebec=Singapore:
George A. Alden & Co. 400,000
Hagemeyer & Brunn. 210,000
Robert Brans & Co. 125,000
W. D. Wadleigh. 100,000
Robinson & Talman. 110,000
D. A. Shaw & Co. 80,000
985,000

FEB. 23.—By the Bries Isel=Singapore:
George A. Alden & Co. 365,000
W. D. Wadleigh. 125,000
Robinson & Talman. 110,000
Wallace L. Gough. 120,000
Robert Brans & Co. 90,000
Winter & Smillie. 50,000
Pierre T. Bettis. 22,000
882,000

GUTTA-PERCHA AND BALATA.

FEB. 3.—By the Patriota=Hamburg:
To Order. 22,500

FEB. 7.—By the Knight St. George=Singapore:
Winter & Smillie. 22,500

FEB. 8.—By the St. Hugo=Singapore:
George A. Alden & Co. 11,000

FEB. 15.—By the Kennebec=Singapore:
Pierre T. Bettis. 16,000

FEB. 15.—By the Kennebec=Singapore:
Winter & Smillie. 7,000

FEB. 20.—By the St. Louis=London:
Kempahall Manufacturing Co. 1,500

FEB. 23.—By the Bleucher=Hamburg:
To Order. 7,000

FEB. 23.—By the Bries Isel=Singapore:
George A. Alden & Co. 16,000

FEB. 23.—By the Bries Isel=Singapore:
Pierre T. Bettis. 13,500

BALATA.

FEB. 16.—By the Marvel=Ciudad Bolivar:
Frame & Co. 2,000

FEB. 16.—By the Majestic=Liverpool:
Earle Brothers. 3,000

FEB. 20.—By the St. Louis=London:
Earle Brothers. 22,000

FEB. 21.—By the Fontabelle=Demerara:
Charles P. Shilstone 11,000

Middleton & Co. 2,000
15,000

CUSTOM HOUSE STATISTICS.

PORT OF NEW YORK—JANUARY.

Imports:	POUNDS.	VALUE.
India-rubber.....	7,202,527	\$5,613,666
Gutta-percha.....	47,436	13,347
Gutta-jelutong (Pontianak)	664,070	22,930
Total.....	7,974,903	\$5,649,873

Exports:

India-rubber.....	31,460	\$36,179
Reclaimed rubber.....	265,755	25,935
Rubber Scrap Imported.....	1,172,412	\$70,320

BOSTON ARRIVALS.

POUNDS.

JAN. 5.—By the Sylvania=Liverpool:	
Poel & Arnold—Fine. 8,501	
JAN. 6.—By the Bohemian=Liverpool:	
George A. Alden & Co.—African.... 15,081	
JAN. 8.—By the Bohemian=Liverpool:	
George A. Alden & Co.—African.... 10,800	
George A. Alden & Co.—Central.... 7,001	
JAN. 11.—By the Canadian=Liverpool:	
George A. Alden & Co.—African.... 11,282	
JAN. 19.—By the Cymric=Liverpool:	
Poel & Arnold—African.... 7,815	
JAN. 20.—By the Inclemore=Antwerp:	
Poel & Arnold—African.... 20,228	
JAN. 25.—By the Sachem=Liverpool:	
George A. Alden & Co.—African.... 21,056	
JAN. 26.—By the Sachem=Liverpool:	
Poel & Arnold—African.... 6,967	
JAN. 31.—By the Sylvania=Liverpool:	
Poel & Arnold—African.... 8,801	
Total.....	112,642
[Value, \$69,523.]	

GUTTA-PERCHA.

JAN. 9.—By the Philadelphia=London:
Winter & Smillie. 5,676

OFFICIAL STATISTICS OF CRUDE INDIA-RUBBER (POUNDS).

UNITED STATES.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904.....	6,329,252	331,867	5,997,385
January—November.....	55,560,506	3,117,566	52,442,940

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
Twelve months, 1904.....	61,889,758	3,440,433	58,440,325
Twelve months, 1903.....	55,744,120	3,601,397	52,052,723
Twelve months, 1902.....	50,865,002	3,264,620	47,601,382

GERMANY.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904.....	4,677,200	1,334,300	3,342,900
January—November.....	33,618,300	8,717,730	24,900,480
Twelve months, 1904.....	38,295,400	10,052,020	28,243,380
Twelve months, 1903.....	34,290,740	11,214,280	23,076,460
Twelve months, 1902.....	33,063,360	13,710,200	19,344,160

FRANCE.*

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904.....	1,297,780	1,083,940	213,840
January—November.....	19,353,840	10,443,960	8,910,880
Twelve months, 1904.....	20,651,620	11,526,900	9,124,720
Twelve months, 1903.....	16,918,220	9,631,160	7,287,060
Twelve months, 1902.....	15,380,440	8,550,540	6,830,900

BELGIUM †

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904.....	1,487,009	2,201,317	[\$714,308]
January—November.....	16,468,284	14,099,978	2,368,306
Twelve months, 1904.....	17,955,293	16,301,205	1,653,998
Twelve months, 1903.....	16,941,753	14,059,030	2,882,723
Twelve months, 1902.....	15,875,178	12,989,064	2,886,114

NOTE.—German statistics include Gutta-percha, Balata, old rubber, and substitutes. French, Austrian, and Italian figures include Gutta-percha. The exports from the United States embrace the supplies for Canadian consumption.

* General Commerce.

† Special Commerce.

‡ Net Exports.

GREAT BRITAIN.

MONTHS.	IMPORTS.	EXPORTS.	NET IMPORTS.
December, 1904.....	4,485,152	2,908,240	1,486,912
January—November.....	51,072,000	30,417,302	20,

